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HEREDITARY CONGENITAL WRY-NECK.

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So much has been written under the title "wry-neck" that one is apt to consider torticollis as an entity and not a symptom. The deformity is so noticeable and the condition so common that no layman, even, is ignorant of its existence. But in spite of its frequency and of the subject occupying a prominent place in all books on orthopædic surgery, researches into a copious literature do not yield a single instance where the condition has been reported on account of its heredity. Through the kindness of Dr. George A. Pirie I am enabled to record the following observations, in which left congenital wry-neck was transmitted through three generations.

The family in question consists of father, mother and four children, two of each sex. The children's maternal grandmother had a left congenital wry-neck, and though she has been long deceased, any doubt as to the trustworthiness of the assertion is set aside by a photograph (Fig. 1) of her, extracted from a group of fellow-workers, taken when she was about thirty years of age. The mother was an only child and is now aged 35 years. She is the subject of a left congenital wry-neck for which no treatment has ever been attempted. The head inclines to the left, the left ear

being approximated to the left shoulder and the face looks towards the right shoulder. The sterno-mastoid muscles are well-developed, though the left is more prominent than the right and the trapezii muscles are not abnormal. The degree of torticollis is slight. She can put her head perfectly straight and without any effort, but as soon as her attention to the position is relaxed, her head invariably inclines again towards the left (Fig.2). The father is a

Fig. 1.—Maternal grandmother.

normally developed man of the artisan class, perhaps slightly undersized, but healthy. The eldest child is a daughter, aged 10 years, strong, well developed, and without peculiarity. The second child is also a daughter, aged 7 years, but she has a left congenital wry-neck (Fig. 3), more marked and obvious than her mother's. It is not contrary to one's experience of relatives' power of observation to learn that the wry-neck in this child was not noticed until she was six months old. She had had no illnesses previous to that time, and has, indeed, had no illness of importance since. Even after the

deformity had been admitted its extent was not appreciated until quite recently, when, the child having fallen and cut her head, her hair was shorn to facilitate dressing; the deformity naturally became much more noticeable. There is marked contraction and prominence of the left sterno-mastoid muscle; the left suboccipital area seems very empty while the right seems fuller than normal, and this fulness appears to be due in great part to the cervical spine, which presents

Fig. 2.—Mother.

a dextro-convex scoliosis. Otherwise the child is of good physical and of normal mental development and is getting on well at school.

The third child is a boy, aged 5 years, strong, well and healthy, and free from defect. The youngest child (Fig. 4) is two years of age. He has a very marked left congenital wry-neck presenting conditions exactly similar to those of his sister in appearance and in every detail, however trifling. The mother and the two affected children were radiographed by Dr. Pirie but no abnormality was found in the bones.

The ætiology of torticollis is somewhat complicated, because though the wry-neck is the most obvious symptom, it may be due to a variety of causes. For the due consideration of torticollis it is customary to divide it into clonic or spasmodic, and tonic or permanent contracture. It appears that the former may develop into the

Fig. 3.—Second child.

latter, and that a long continuance of spasmodic torticollis may result in permanent contracture of the affected muscles. There is a danger, however, of using the term too loosely, for the muscle at fault in torticollis is the sterno-mastoid, and any other muscles which undergo contracture are apparently secondarily involved just as the bones or fasciæ may be. Little has pointed out that muscles relying for their nerve-supply on one nerve are much more liable to be affected

by clonic or tonic spasm than are muscles which derive their nerve-supply from several sources, and these conditions are pre-eminent in the sterno-mastoid muscle.

Torticollis may be congenital or acquired. I have elsewhere recorded a case where congenital scoliosis was caused by the intervention of

Fig. 4.—Youngest child.

an extra half vertebra in the dorsal region of the spine, and in this a secondary cervical compensatory scoliosis existed. I have in my possession a macerated spinal column of a young child which presents a congenital scoliosis of the cervical spine due to an abnormal development of the cervical vertebræ. This child during life presented an appearance of left congenital wry-neck, but the many other congenital defects of which it was the subject overshadowed the

torticollis, which in him was but a minor deformity. Still, such cases go to prove that a congenital abnormality of the cervical spine may be the cause of congenital wry-neck. A notable example of an acquired torticollis not due to muscular causes is reported by Bouvier, where a lad, aged 18 years, struck on the neck by a plank, at once developed permanent left wry-neck. He died at sixty years of age, and it was then found that the shortening of the left sterno-mastoid was secondary to fracture of the transverse processes of several of the cervical vertebræ with curvature of the cervical spine and fusion of the bodies. Petersen advances this case as evidence that shortening of the muscle with fibrous degeneration is not evidence of previous injury to the sterno-mastoid. That the bones do become abnormal in shape if persistent torticollis be congenital or acquired in early life is only what would be expected, but it is not correct to say that this is the cause, though one might endorse Jackson Clarke's statement that "the shape of the bones is so markedly altered that it alone accounts for the persistence of the deformity."

At one time much discussion took place on the co-existence or pre-existence of congenital tumour of the sterno-mastoid in torticollis, and I think all will agree with Tubby that the evidence of injury to the sterno-mastoid as a cause of torticollis is, to say the least of it, conflicting. Tubby also points out that a congenital tumour of the sterno-mastoid may be found after a normal labour, and that the absence of discoloration is one reason to discount the existence of an injury, and he states definitely that congenital tumour of the sterno-mastoid is certainly not always a hæmatoma.

I have no personal knowledge of a case of hæmatoma of the sterno-mastoid being followed by torticollis, but my experience is a small one, and I have only notes of four cases. Nor do I have a single instance out of thirty cases of congenital wry-neck where there was any evidence that a hæmatoma of the sterno-mastoid had at any time been present. Kirmisson believes in the traumatic origin in "the immense majority," but his translator points out that Lever, of Boston, considers the condition to be a contraction closely resembling a condition found in Volkmann's ischæmic contracture. Indeed, Petersen goes so far as to hold that congenital hæmatoma of the sterno-mastoid is the result of injury at birth to a congenitally contracted muscle. It certainly goes far to accentuate the value of Petersen's theory that contraction of muscle in adults does not follow a rupture, traumatism (without loss of substance from septic infection), or a peri- or intra-muscular hæmatoma.

So astute an observer as Dr. John Thomson, however, is con-

vinced that there is a causal relationship between torticollis and congenital hæmatoma, though he has not published any notes of his observations, and so definite a statement by such an authority is sufficient reason to look for evidence that it occurs. D'Arcy Power did good service in controverting Stromeyer's too sweeping statement that congenital wry-neck was almost without exception due to injury done to the sterno-mastoid muscle at birth, and Clutton, in recording his experience of eighteen cases of mastoid tumour, notes that in one of these to his own observation wry-neck followed, and in two others "wry-neck is stated to have been subsequently observed."

Congenital hæmatoma is more common on the right side than on the left, but may occur in either or both sterno-mastoid muscles, and it is more common in male than in female infants. This in a way corresponds with torticollis, for torticollis is more common in males than in females, and more common on the right side than on the left. It is a coincidence worth investigating, but it is no proof of sequence.

That must have been a curious experience of Golding Bird's that "congenital wry-neck never affects the left side." It is not borne out by the experience of others, and certainly not by mine. In twenty-four consecutive cases of congenital torticollis which I observed, eight were of the left and fifteen were of the right side, while in one case both muscles were affected, the right more than the left, however, and this determined the side of the deformity. Incidence was equal in the sexes. Golding Bird's statement that "the pre-existing circumstances of which the deformity of congenital wry-neck is the immediate sequence are similar to, if not pathologically identical with, those that bring about an attack of infantile paralysis and its later complications," cannot have a wide application, and competent criticism is, that if this analogy were even occasional, wry-neck would not be the congenital condition it usually is. This leads naturally to the consideration of the nervous origin of the deformity.

Most will probably approve Little's statement that "the greater number of cases of congenital wry-neck clearly originate from causes acting through the nervous system."

Horsley points out that the affection of the nerve-fibres may occur in the cortex cerebri, the corona radiata, the cerebellum, or the spinal centres of origin of the spinal accessory and the first four cervical nerves. The excitation may be direct or indirect by irritation of the afferent nerves. He avers that excitation of the cortex

results in a combination of tonic and clonic spasm, while excitation of the lower centres (the cerebellum and spinal cord) must generally produce tonic contraction. The muscles involved in torticollis are supplied by the spinal accessory and those on the posterior aspect of the spine (the complexus, splenius, rectus capitis posticus, trachelo-mastoid, semi-spinalis, etc.) are supplied by the posterior primary branches of the first five cervical nerves. Direct excitation may be caused by inflammatory processes, new growths, and poisons circulating in the blood. Torticollis has been observed by Nobécourt and Fenestre to occur in connection with enteric fever, and John Thomson states — "occasional severe wry-neck and other forms of muscular rheumatism occur in lithæmia." There seems no reason why it should not occasionally be brought about in the same manner as a poliomyelitis. An example of indirect production is seen in herpes zoster, after operation for removal of adenoids by any inflammatory disturbance in the neck or by enlarged cervical glands (Ferrari).

Hutchinson records a case in which torticollis came on, in a girl of eleven, after very violent convulsions at the age of six years. However much these pathological conditions may be offered as explanations of cases of wry-neck, whether spasmodic or tonic, acquired or congenital, they do not in any way explain the possibility of a familial tendency. I do not know of any case in literature where it has been found to exist through several generations, but I once operated on a woman of twenty-eight the subject of left congenital torticollis, in which a child in a sister's family had right wry-neck. Such an isolated example as this may be interesting, but it is useless, for it is more than likely a coincidence. In the above family, however, the presence of wry-neck of the same side through three generations puts coincidence out of the question. Though difficult of demonstration, there is a common concurrence that certain cases of club-feet and other congenital deformities are due to malposition *in utero*. That such an explanation may be feasible in some cases of congenital wry-neck is obvious, and Tubby, in writing of congenital wry-neck, says that a likely cause seems to be "shortening of the muscle following inclination of the fœtal head" as it lies *in utero*. This, Tubby says, is supported by two facts—first, that congenital torticollis is usually on the right side; and second, that in 75 per cent. of births the fœtal head is in the first position, which is associated with flexion of the head towards the right shoulder. It seems more incredible either that the muscles of one side or that the nerves going to these muscles should be the

subject of pathological changes in members of a family throughout three generations, than that there should be a tendency to some abnormal position during the growth of the fœtus *in utero*. Busch (quoted by Petersen) writes : "In a slightly inclined pelvis the head sinks several months before the time into the small pelvis and remains here fast as caput ponderosum. The uterus lies with the fœtus in the last months anteflexed ; there is, therefore, between the trunk and the head a bending forwards. In the first head presentation it is, therefore, the right side of the neck which is shortened."

It is obvious that if there be anything in this explanation, the hereditary transmission of some slight pelvic defect or peculiarity might influence through generations the presentation or position *in utero* of the fœtus. The inference would also be justifiable that the deformity would be transmitted only through the females, and the surprising thing would be, not that wry-neck should be transmitted at all, but that it should be transmitted so seldom. Petersen himself favours amniotic bands as a frequent cause of intra-uterine wry-neck. Be that as it may, it is difficult to dissociate congenital familial wry-neck and some maternal source of causation.

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TWO CASES OF ATELEIOSIS.

ATELEIOSIS IN A WOMAN AGED 20 YEARS, WITH A SLIGHT CONGENITAL MALFORMATION OF THE HANDS AND FEET; ALSO A FURTHER ACCOUNT OF A CASE OF ATELEIOSIS PREVIOUSLY DESCRIBED.

By F. Parkes Weber, M.D., F.R.C.P.,

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The first patient, E. B—,* of Polish-Jewish descent, born in June, 1892, is small and infantile in development. Height, 135 cm.; weight, 34 kilogrammes. According to the mother's account she was born at full term without instrumental aid. She learned to talk and walk like other children. She was always small and delicate, but has hardly increased in height or general development since the age of 12 years. She has never menstruated. She has been subject to psoriasis since the age of 10, and has chronic middle-ear disease on the right side, which apparently followed scarlet fever at 5 years of age. She has likewise had measles, mumps, several attacks of tonsillitis, and (at 7 years of age) severe pneumonia. For a considerable time between the scarlet fever at 5 years of age and the pneumonia at 7 years of age, she suffered from more or less baldness of the scalp. In 1907 she was for a short time an in-patient under my care for an attack of diarrhœa with dysentery-like symptoms. In 1910 she had swelling of the right knee for two or three weeks without fever. Two years ago she was treated at a hospital for lateral curvature of the spine. She is the eldest child of healthy parents. Of her five brothers and sisters four are living, and one (the fifth of the family) died as a baby of convulsions and pneumonia. The mother has had no miscarriages or abortions. There seems to have been no dwarfism, infantilism, or congenital malformation of hands and feet in any other members of the patient's family.

Present condition.—There is a slight congenital malformation of the hands and feet, consisting in decided relative shortness of the fourth finger (ring-finger) of each hand, and the fourth toe of each foot. Röntgen-ray examination of the hands (*v.* Fig. 2) and feet shows this deformity to be due to abnormal shortness of the fourth metacarpal and fourth metatarsal bones respectively. The patient has a fresh complexion and, as already stated, suffers from chronic psoriasis and chronic right middle-ear disease. The lower jaw

* This case was shown at the Clinical Section of the Royal Society of Medicine on April the 11th, 1913.

is relatively somewhat small and the chin receding. The teeth are fairly well developed. The thyroid gland seems very small. The breasts are quite infantile, and there is complete absence of pubic and axillary hair. A gynæcological examination made under general anæsthesia by my colleague Dr. E. Michels, at the desire of the patient and her mother, showed that, although a small intravaginal portion of the cervix uteri was present, the body of the uterus seemed almost absent, and no ovaries could be felt. Nothing abnormal can be detected by ordinary or X-ray examination of the thoracic

Fig. 1.—Photograph of the patient, E. B— (on the left), showing abnormal shortness of the fourth finger of each hand and fourth toe of each foot. On the right is a normal woman of about the patient's age, for comparison in regard to size.

viscera, or by palpation of the abdomen. The liver and spleen are not enlarged. The pulse is rather frequent (104 to 116 per minute), and the brachial systolic blood-pressure rather low (100 mm. Hg.). Blood examination (April the 3rd, 1913): Red cells, 4,200,000 to the cubic millimetre of blood; white cells, 8000; hæmoglobin, 65 per cent. The urine (quantity not excessive) is free from albumin and sugar, but on one occasion recently was found temporarily to contain 0·33 per cent. of sugar. In a case of so-called "mitral infantilism," I recently observed similar occurrence of temporary glycosuria. The condition of the bowels seems to be normal.

Ophthalmoscopic and perimeter examinations (Dr. C. Markus) show nothing abnormal ; the visual acuity is $\frac{6}{9}$ for each eye. The pupils react naturally to light and accommodation. The patient has, as already stated, old middle-ear disease, and she is slightly deaf. The knee-jerks are excessive (as in some neurasthenic subjects) ; Achilles reflexes active ; no ankle clonus. In proportion to the bodily development the patient's mental development seems to be fairly

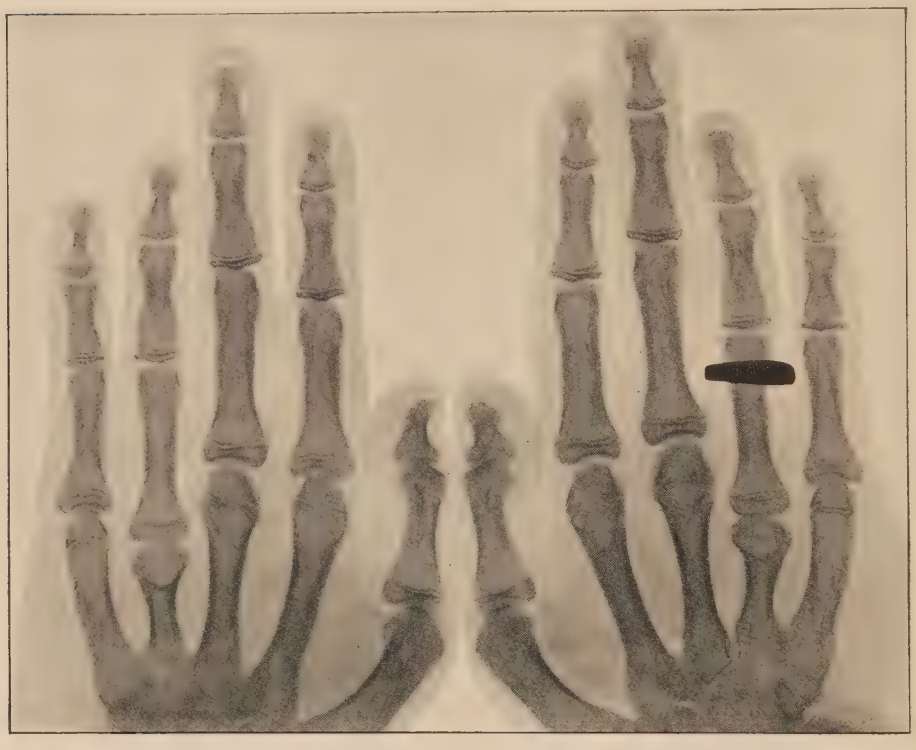

Fig. 2.—Skiagram of the hands of E. B—, aged 20 years, showing abnormal shortness of the fourth metacarpal bones and abnormal persistence of epiphysial cartilages.

good, and she is able to earn a little money at fur-machining. Dr. Reginald Langdon-Down has kindly examined the patient's mental development by the Binet tests (April, 1913), and he reports as follows :

" This patient suffers from the drawback of a slight defect of hearing, which probably affected her response to some of the tests to a certain degree, for which allowance has been made. The examination shows that she has an intellectual development equivalent to

that reached by the average child aged about 13 or 14. It is admitted that the differentiation of natural capacity towards the upper limit of the scale is more difficult, even with the revised Binet's tests, or their modification by Goddard, and these are at present in a tentative stage and do not attempt a closer approximation over 12 than a test for age 15, and one for ages more than 15. This case seems to fall just short of the 15 standard. It is obvious that social status and environment may exercise considerable influence in these higher levels, and that standardisation becomes more difficult owing to increasing complexity of development and individual divergencies."

In regard to the osseous system, there is slight spinal scoliosis. Skiagrams (Dr. N. S. Finzi) show abnormal persistence of epiphysial cartilages, and the congenital abnormality of the metacarpal and metatarsal bones already referred to. In those taken of the hands (Fig. 2) most of the epiphyses are seen to be bordered by a very deep shadow, as if by sclerosed bone. Skiagrams of the region of the sella turcica at the base of the skull seem to show a rather small pituitary fossa.

I think the present case should be included amongst the "ateleiosis" group according to the descriptions of Hastings Gilford,* the originator of the term. Both this case and the one I described previously in the British Journal of Children's Diseases† do not apparently show any special anomaly of the sella turcica region at the base of the skull, unless the pituitary fossa is abnormally small in both cases.‡

The patient (F. B. H—), whose case I described three years ago, and to whom I have just alluded, is now aged 45 years. He is an infantile dwarf, of English parentage, whose height without boots or shoes is 120·5 cm. (47½ in.), and who at present weighs 26·5 kilogrammes (58$\frac{3}{10}$ lb.) without clothes. He has heard his parents say that he was much like other children up to the age of 9 years, but that his growth and development then ceased. He is said to have had "water on the brain" as a baby, and as a child to have had two or three falls on the head. He cannot himself remember having had any serious illness. There is no history of chronic diarrhœa or intestinal steatorrhœa. His head is rather large for the diminutive

* 'Med.-Chir. Trans.,' London, 1902, lxxxv, p. 305. See also Gilford's account of the disease in his book on 'The Disorders of Post-Natal Growth and Development,' London, Adlard and Son, 1911.

† 1910, vol. vii, p. 359.

‡ On the form of the skull in "Ateleiosis" and "Progeria," see Prof. A. Keith, 'Lancet,' 1913, i, p. 305.

size of his body. The shape of his trunk, the undeveloped state of his sexual organs, the appearance of his neck (owing to the want of projection of the "pomum Adami") and the high pitch of his voice are those of a child, but his expression, the wrinkles on his face, his attitude, his manner of speaking and his general behaviour are somewhat more those of an adult. His mental development is childish but otherwise not abnormal. He cannot read or write, but, apparently "on account of weakness," the doctor would not let him go to

Fig. 3.—Photograph (1913) of the patient F. B. H—, (on the right), together with a boy, aged 8¾ years, of normal size and development.

school as a child. He earns a little money by light work in a glass factory. Dr. Reginald Langdon-Down has kindly examined the patient's mental development by the Binet tests (April, 1913), and he reports as follows:

"This patient is interesting, as he was deliberately deprived of school instruction on medical advice, and, on the other hand, owing to his mature years, has long been subject to the influences of everyday life in town. The result of this environment has been to produce a superficial sharpness in one or two directions, which might readily mislead one in judging of his intellectual development. In

grading him the modified scale of the Binet tests has been used, which avoids as far as possible tests which depend upon the results of instruction. The examination shows that he has reached an intellectual development such as is reached by the average child aged 8."

His father and mother both were born in 1832, and lived to about the ages of 56 and 50 respectively. There is no history of any other dwarfism or infantilism in the family.

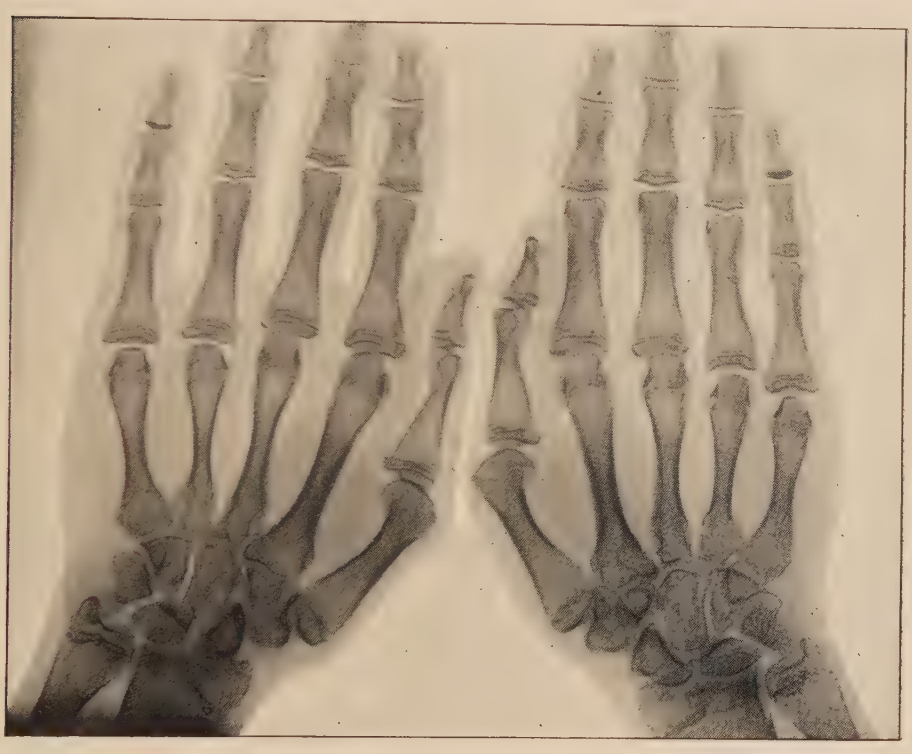

Fig. 4.—Skiagram (1913) of the hands of F. B. H—, aged 45, showing persistence of some of the epiphysial cartilages, which are bordered by deep shadows apparently due to sclerosed bone.

On the whole there has been little change since I examined him in 1910, and as yet the hair of his scalp shows no greyness, nor is his head at all bald. There is no hair on his face or pubes or in his axillæ. The penis is exceeding small. No testicle can be felt on the right side; the left testicle, of about the size of a small cherry, is incompletely descended. Nothing abnormal can be discovered in the heart, lungs, or blood-vessels, or in the abdomen (by palpation), or by examination of the urine. Pulse, 100 per minute. Brachial

systolic blood-pressure, 145 mm. Hg. Blood examination (Dr. Bauch, April, 1913): Hæmoglobin, 80 per cent.; red cells, 5,040,000, and white cells, 15,900 to the cubic millimetre of blood. The abdomen is prominent so as to form a regular "alderman's paunch," and the development of the subcutaneous fat about the back of the neck and the front of the thorax is of somewhat eunuchoid type. He apparently has never had penile erections or sexual desire, but has had nocturnal emissions occasionally. The texture of the skin, the facial complexion, the extreme fineness of the hairs of the scalp and the small size of his thyroid gland all suggest that there may be an element of hypothyroidism combined with the ateleiosis, but these features may be merely a part of the general infantilism.

Examination of the eyes (Dr. R. Gruber, April, 1913): The pupillary reactions are normal. In each eye there is a little horizontal nystagmus on exact fixation of objects. In each eye there is a central corneal macula (from old inflammation), with a little pigment on the anterior capsule of the lens. The optic discs are both normal. In the left eye, one and a half disc-diameters above the optic disc, is a well-defined circular area (resulting from old retino-choroiditis), a little larger than the optic disc, over which the retinal pigment has disappeared (with the exception of some small irregular specks), so that the choroidal vessels are clearly visible. At the inner upper peripheral portion of this area there is a small spot of shining silvery-white appearance, lying around a retinal artery, which it partly covers. The visual acuity for the right eye is $\frac{6}{36}$, and for the left eye about $\frac{6}{24}$. With the perimeter the fields of vision cannot be exactly traced out, but there is no temporal hemianopsia. There is no colour-blindness. The atrophic retino-choroidal patch in the left eye is similar in appearance to patches supposed to be seen after recovery from miliary tubercles of the choroid. The impairment of vision and the nystagmus are probably due to the old corneal maculæ. Examination of the ears (Mr. G. J. Jenkins) shows nothing abnormal, excepting that the external auditory meatus is of the infantile type. It may be here mentioned that the patient's knee-jerks are very difficult to obtain, but are not altogether absent; there is no ankle clonus; the plantar reflexes are of the normal flexor type.

In regard to the condition of the skeleton, there is slight spinal scoliosis. Skiagrams (Dr. N. S. Finzi) of the extremities show persistence of some of the epiphysial cartilages, but the amount of union of the epiphyses with the diaphyses varies considerably in different bones. Dr. Finzi points out that, in the skiagrams of the

hands, those epiphyses which are not yet joined to the diaphyses, and some of the diaphyses themselves, are seen to be bordered by a very deep shadow, as if they were bordered by sclerosed bone. The epiphysis of the terminal phalanx of each little finger is represented by a single very black line, as if it entirely consisted of very much sclerosed bone. In the same skiagrams the carpal bones seem to be relatively more developed than the bones of the metacarpus and fingers. When I previously showed the case I thought that skiagrams of the skull showed nothing special. Fresh skiagrams of the sella turcica region recently taken by Dr. Finzi seem to show that the posterior clinoid process is very thick, but slight variations in the position of the head may make considerable differences in the skiagraphic appearances at the base of the skull. The pituitary fossa is, however, almost certainly rather small.

TWO SUCCESSFUL CASES OF OPERATION FOR STRANGULATED INGUINAL HERNIA IN FEMALE INFANTS OF THE AGES OF 22 AND 17 DAYS.*

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In September, 1912, a female infant, aged 22 days, was admitted under my care into the Radcliffe Infirmary. The mother stated that the baby was entirely breast-fed, and that for the last five days nothing had passed through her bowels. The family attendant, without seeing the child, advised the mother to give it castor oil; this, however, was invariably vomited as soon as swallowed. The infant had vomited for three days, had moaned almost continuously as if in great pain, and had slept hardly at all during the whole of this time. When examined, a firm, tense swelling was found in the right inguinal region the size of a small hen's egg. Both legs were tightly drawn up, and the child was blanched and obviously very ill. A few drops of chloroform were administered, and after the necessary surgical preparations had been made herniotomy was performed. In the hernial sac were found the right ovary and Fallopian tube together with a small loop of the small intestine. This last was severely strangulated, and purple-black but shiny. The circulation was gradually restored by the aid of a warm saline wash and the colour soon improved.

The contents of the sac were returned to the abdomen, the neck

* A paper read before the Section for the Study of Disease in Children of the Royal Society of Medicine on April the 25th, 1913.

of the sac ligatured off, while the sac itself was excised and the operation rapidly completed. Recovery was complete and quick, and the babe is is to-day well-grown, fat, and shows no after-effects from the operation.

Case 2.—On March the 6th of this year I was called into the country to see the female infant of a lady who had been confined only seventeen days previously and who was still in child-bed. The family physician informed me that the child had been screaming much since birth, that it had vomited all its food for nearly three days, that its bowels had not moved even with the use of glycerine suppositories for four days, and that it refused the breast. In the right groin was a swelling, tense, tender, and tympanitic, the size of a small tangerine orange. I decided to operate at once, realising that we had to deal with a strangulated inguinal hernia in a very young and feeble subject. After the necessary preparations had been hurriedly made, and with the help of chloroform, I cut down upon and opened the sac. The contents consisted of a swollen and very œdematous cæcum with a long discoloured appendix vermiformis. The appendix was exceptionally large I thought for such a young infant, and owing to the presence of a very short mesentery it had become doubled upon itself so as to produce a condition of almost complete strangulation. This organ was quickly removed, and after considerable difficulty at the internal ring I succeeded in returning the swollen cæcum. The internal abdominal ring admitted two fingers. The sac was ligatured, and the wound closed and dressed with collodion. In a very short time after the little one took the breast, passed water, and fell asleep. The bowels were moved naturally a few hours later, and the wound healed without any trouble. I have recently heard that she is now thriving and is in all respects well.

Several points of interest to the surgeon may be gathered from the experience of these cases; and amongst them may be narrated:

(1) The early stages at which strangulation occurred, and with apparently no definite cause.

(2) The unusual nature of the hernial contents: in the one case an ovary and tube as well as small intestine; in the other, an unduly mobile cæcum with large appendix measuring $3\frac{1}{2}$ in.

(3) The successful issue in each case even after the obstruction and symptoms of strangulation had lasted for over three days.

(4) The absence of post-operative shock after a general anæsthetic and herniotomy, and in the younger infant after appendicectomy in addition.

Herniotomy in such young infants must be exceptional, and a successful appendicectomy at the age of seventeen days is certainly so.

REFRACTION WORK IN SCHOOL-CHILDREN.

By John Allan, M.D., D.P.H.

Within the last few years, and since the Act for the medical inspection of school-children has come into force, the numbers of refractions done in children of school age have greatly increased. Refraction work has come to be quite an important branch of ophthalmic practice, and those who undertake it cannot justly claim to perform it properly without having had adequate training. The technique of refraction is not easily mastered, and before attaining proficiency there are many difficulties to overcome.

In carrying out the investigation of the refraction of a child of school age there is a certain routine to be followed. The examination must be carried out systematically, and it cannot be too strongly urged that refraction work performed in an unsystematic and haphazard manner is almost worthless, and the results obtained will be disappointing. There are many divergent views held regarding the best means of doing this work, but I do not intend to discuss the opinions expressed by different ophthalmic surgeons. I shall content myself by briefly giving the routine I have come to adopt after some experience in this matter. I do not for a moment claim that it is the best method, but I do say that in my experience it answers well.

When a child is brought with the complaint of defective vision the first thing to do is to test the distant vision by means of the Snellen test-type, each eye being tested separately. The information thus obtained may be of the utmost value. In the adult one would next proceed to find out if vision is improved by various lenses, but in the case of children this is merely waste of time. The only satisfactory way of diagnosing and estimating the refraction of the child is to have the eyes under the influence of a cycloplegic. I am well aware that many ophthalmologists think this is quite unnecessary, but I cannot agree with them. It is admitted that the refraction in many children can be obtained without paralysing the ciliary muscle, but it is less easy to estimate the error of refraction when the pupil is not dilated. The best cycloplegic to employ is atropine, which may be prescribed in the form of drops or an ointment. My practice has been to order 1 per cent. atropine ointment to be put into the eyes twice daily for a week (three days will do if the ointment is properly applied). The lower lid is everted, and a minute portion of ointment is placed in the conjunctival *cul-de-sac*.

It is advisable to warn the parents of the mydriatic effect of the atropine, otherwise it may be prematurely discontinued. The dilatation of the pupils may alarm some parents, and, again, the dimness of vision which generally supervenes after the instillation of atropine may lead those in charge to stop using the atropine. This can, as a rule, be avoided if one tells the parents of the effects expected when atropine is employed. I have sometimes been asked if there is no danger of poisoning by atropine, but the danger of toxic symptoms arising is very slight, and in several thousand cases I have only met with symptoms of atropine poisoning in two. Curiously enough, in both these cases atropine drops had been used, and in one of them atropine in the form of ointment was ordered some eighteen months later without untoward effects. When atropine drops are instilled it is not unlikely that some of the solution runs down the lachrymal duct and trickles down the back of the throat, and absorption takes place. In a few cases, also, "atropine irritation," which is evidenced by erythema, swelling of the lids, etc., occurs, but this is likewise of exceptional occurrence.

At the end of three days or a week the child is brought with the pupils well dilated, and retinoscopy can now be carried out with the greatest of ease in the majority of cases. During the estimation of the refraction in this way, it is wise to get into the habit of taking a "bird's-eye view" of the fundus in each eye. Many unexpected lesions are often discovered in this way, and the conditions found may account for failure to get the proper response to appropriate lenses. As soon as the retinoscopy is completed the child may be tested for glasses, but, in my opinion, it is far better to wait until the mydriatic effect has passed off (about two weeks) before trying the child with lenses. One can then more satisfactorily arrive at the correcting lenses which are most suitable for the child. Very often theory is not carried out in practice, and it is not uncommon for the child to fail to accept the full correction according to the retinoscopy result. Another point is that when the effect of the atropine has passed off, the child can be tested also for near vision —a very important factor in some cases.

When suitable glasses have been obtained, these should be prescribed for constant wear in the majority of cases. The child ought to be brought regularly every six months to be tested to see if the glasses remain suitable. If they are in any way unsatisfactory, the routine just described should be repeated, and different lenses ordered according to the results obtained. There is no doubt that much good could be done as regards conservation of vision by the careful

examination and treatment of defective eyesight in childhood, and it is to be earnestly hoped that systematic inspection will do much in the future.

The Royal Society of Medicine.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Provincial Meeting, at the General Hospital, Northampton, Saturday, June the 21st, 1913.

Mr. A. H. Tubby, *President, in the Chair.*

? Hypopituitarism.—Dr. R. A. Milligan.—Man, aged 23 years. Admitted for fracture of the right femur. He had had pain in the right thigh for two or three weeks, and about a week before admission his leg gave way when walking; no history of injury. Family history negative. He stopped growing when aged about 12 years. He left school (Standard III) at the age of 11 years, owing to defective vision; he had since helped his father on a farm. During the last two or three years he had been subject to attacks of headache and vomiting. Patient has the appearance of a boy aged about 12 years he has a weak child-like voice; his genital organs are infantile. He is quiet and seems drowsy: his appetite is poor and he lives chiefly on liquids. Since admission he has had attacks of headache and vomiting; his pulse is slow, sometimes as little as 56; blood-pressure 90 mm. Hg. Dr. Harries Jones reports that he has retinitis pigmentosa. Visual fields have not been taken yet. X rays shows a transverse fracture of femur just below the neck; no cause for it is apparent. Skiagram of the sella turcica shows nothing abnormal. The patient died fourteen days ago; no autopsy was permitted.

Congenital Family Jaundice.—Dr. P. S. Hichens.—Mother and two sons all suffering from familial jaundice. Mother has had ten children and five miscarriages. She has been anæmic all her life and became jaundiced during her first pregnancy; she has been jaundiced many times since. Children: (1) Female, 1892. Born yellow; died after five days. (2) Female, 1893. Born yellow; died after ten days. (3) Male, 1894. Born yellow; has frequent slight attacks of jaundice, otherwise in fair health. (4) Male, 1896. Slightly jaundiced. (5) Female, 1898. In good health. (6) Male, 1901. In good health. (7) Female, 1904. In good health. (8) Male, 1906. Born yellow and has occasional attacks of jaundice. (9) Female, 1907. In good health. (10) Male, 1910. In good health.

The mother and Nos. 8 and 10 are shown. Mother: Liver not enlarged; spleen extends below costal margin. Heart: Systolic murmer with its maximum at third left interspace and conducted upwards and to the apex. Son (8): Liver not enlarged; spleen just palpable. Heart: Systolic bruit with maximum intensity at third left interspace and extending up and down. Son (10): Liver not enlarged; spleen enlarged with a hard sharp border.

Heart: A loud blowing systolic murmur is heard over the whole præcordial area and through to the back.

The other son (not shown) presented much the same murmur.

? Cretinism.—Dr. Hichens.—Girl, aged 2 years and 2 months. Breast-fed and weaned at the age of ten months; then fed on wheat flour, Robinson's patent groats, etc. At the age of fifteen months began to swell all over and hair began to grow copiously all over her body; her gums became spongy and four of her milk teeth were shed; she became extremely irritable and passionate: some pigmentation was noticed over the lower part of the abdomen and peeling of the hands and feet. There appeared to be much fat in the limbs or else a myxœdematous condition; no cushions of fat above the clavicles. Slight rickety changes in the limbs, but no pain in them. The child has been treated with thyroid extract 5 gr. daily and has made a good recovery.

? Henoch's Purpura.—Dr. W. M. Robson.—Boy, aged 10 years. On May the 8th, 1913, trod on a rusty nail and developed a poisoned foot. On May the 11th red spots appeared on both legs below the knees. On May the 18th he began to vomit and had griping pains in the abdomen. Admitted on May the 28th with vague pains in his knees, elbows and wrists temperature 99° to 100° F. On the limbs, especially about the knees and wrists, a purpuric rash was present. The heart is normal and the joints were not swollen or red, but tender on pressure. The urine contained albumin and blood. Microscopically: Pus-cells, red blood-discs, but no casts. On June the 8th the rash became more profuse, there was more blood in the urine and the joint pains again more marked.

No history of previous hæmorrhages.

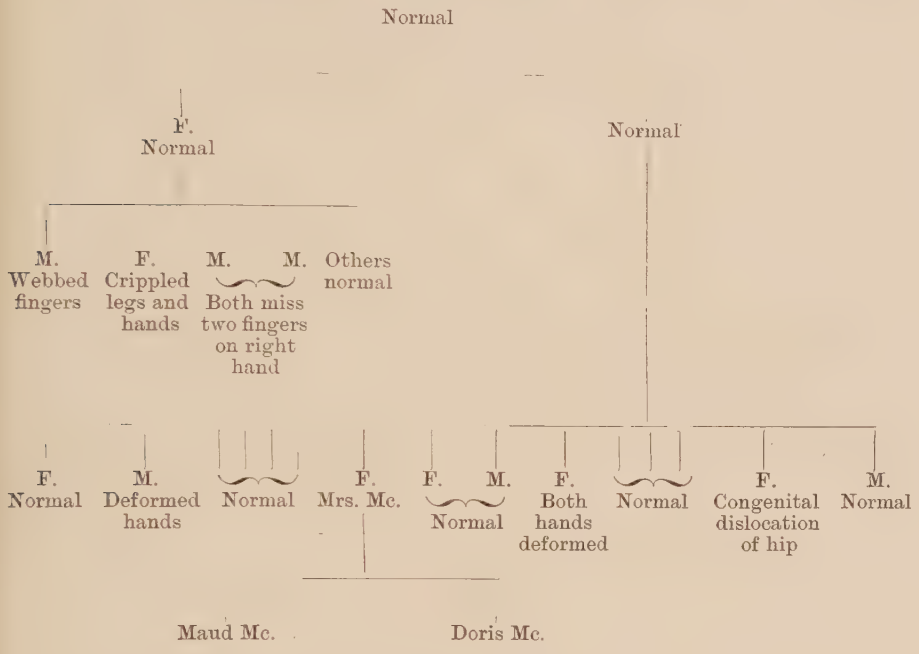
Pemphigus.—Dr. Robson.—Boy, aged 4½ years, began to have blisters on him three years ago; they were never profuse. In July, 1912, a more profuse eruption began on the legs and gradually spread to the abdomen, arms, face and neck, and lastly, to the back. The groins and axillæ have been more affected than the rest of the body. Other children of the same family normal. Admitted May the 14th, 1913. Some of the bullæ were small and contained clear fluid, others were opaque. On May the 18th, some of the bullæ became septic and the temperature rose to 101° to 102° F. A culture taken from an apparently non-pustular blister gave a pure culture of *Staphylococcus aureus*. Treatment has been increasing doses of liq. arsenicalis, boracic baths and injections of *Staphylococcus aureus*.

Polyarthritis due to Congenital Syphilis.—Dr. Robson and Mr. Odgers.—Girl, aged 18 years. At the age of eight years she began to have rheumatism which has affected her hands and feet and knee-joints at different times. The joints of both hands and wrists are swollen and deformed; she has marked nerve-deafness, the signs of old interstitial keratitis and Hutchinson's teeth.

Lymphangioma of Tongue.—Mr. N. B. Odgers.—Man, aged 29 years. Since birth he has had a "nævus" of the left side of the tongue and this has steadily got bigger: lately it has been more painful.

Commencing Leontiasis Ossea.—Mr. Odgers.—Youth, aged 18 years. The anterior nares are almost completely occluded by hyperostoses of the nasal processes of the superior maxillæ; he is evidently a congenital syphilitic.

Congenital Absence of Tibiæ and other Deformities.—Dr. W. M. Robson and Mr. N. B. Odgers.—Mother and two children with deficient limbs. Mrs. M— has some fingers congenitally absent. Maud M— has the middle finger of the left hand missing; further there is congenital absence of both tibiæ and some toes. Doris M— has one finger and a toe missing. This family tree shows several members similarly affected.



Fibro-sarcoma of Thigh.—Mr. Odgers.—Boy, aged 14 years, has since birth had a tumour in the right thigh; for six months it has been getting bigger. He had on the inner aspect of the back of the thigh a solid tumour which appeared encapsuled. On operation it was found to be growing from the sheath of the semi-membranosus muscle, which it infiltrated; this latter was removed in its whole length with the tumour. The tumour appears degenerated in many places; in its upper pole is well-formed bone. Microscopically it appears to be a fibro-sarcoma.

? Phleboliths in Forearm.—Mr. F. A. Wagstaffe, showed a woman, aged 24 years, who had fractured her left forearm at the age of eight years. For the last three to four years she has had attacks of pain at the seat of fracture lasting for two to three days. Six weeks ago she came with a condition resembling a cellulitis of the forearm with exquisite tenderness at the seat of the old fracture and at various spots below it; in a week this subsided. X rays show dotted about the forearm a dozen or more discrete shadows, some of them the size of split-peas, the majority being smaller.

Ectopia Vesicæ.—Dr. D. Stone.—Boy, aged $2\frac{3}{4}$ years. He is an apparently healthy child; he has complete epispadias, while the posterior wall of the bladder forms a deep red bulging mass about the size of a crown

from which urine slowly oozes. On the rudimentary penis is a mark resembling the urethral opening; the testes are both present in the inguinal canals.

Abdominal Hydatids.—Dr. D. G. Greenfield.—Boy, aged 10 years. When he was aged 3 years his mother noticed a lump on the right side of his abdomen; a year later there was a large swelling extending downwards below the right costal margin. Between 1909 and 1911 three hydatid cysts were drained in Guy's Hospital by Sir Alfred Fripp. A year ago he had slight hæmoptysis on two occasions; his liver is still considerably enlarged.

Congenital Eye Conditions.—Dr. E. H. Harries-Jones showed cases of coloboma of iris, persistent pupillary membrane, and persistent hyaloid artery.

? Gumma in Left Crus Cerebri.—Dr. D. Stone.—Girl, aged 6 years 10 months, born healthy, grew to average height and weight and well till last August. She then contracted whooping-cough, which was followed immediately after by an attack of measles. Since this period her present illness has lasted till now.

Her only sister, aged 15 years, is in good health. Between the two there have been three miscarriages, one at four months' gestation and two at three months'. The mother suffers from pain in the left arm of an obstinate character and worse at night. Four years ago she lost a good quantity of hair from one spot over the right temple. This left a bald patch for some time. She also suffered at times from sore throat accompanied by loss of voice and has bad enlargement of the glands in the right side of the neck.

Before the child was seized with whooping-cough she suffered from strabismus—internal from the mother's description. Since last August she has been confined to bed or the couch with paralysis of the right side of the body. Up to the last few weeks she had attacks of vomiting, accompanied by headache.

Present condition: Right half of face, right arm and leg paralysed, with coldness of the hand and foot. There is absolute inability to move hand or foot on that side, and in smiling the right half of the face remains motionless. On the same side there is an exaggerated knee-jerk, ankle clonus and Babinski's sign.

The left eye exhibits several changes. There is ptosis, very marked, the pupil is widely dilated and there is paralysis of the muscles of the eyeball, almost complete. Slight movement outwards is the only movement detectable. There is no drawing up of the eyebrow on that side. The pupil is inactive to light or accommodation (ophthalmoplegia interna). The head is square-shaped and the forehead is high and prominent. The teeth are short and overcrowded.

She apparently hears well but replies to questions in monosyllables and in a slow and hesitating manner, and is inclined to sleep throughout a good part of the day.

On tapping the skull near the junction of the right parietal bone with the frontal some pain is elicited.

Papers.

(1) **Case of Sudden Death in Children who have been treated for Extensive Eczema**—Dr. Hichens.

(2) **Nocturnal Enuresis.**—Dr. Robson.

CLINICAL SECTION.

May the 2nd, 1913.

Purpura Hæmorrhagica, a Fulminating Case; Gelatine Treatment.—Dr. F. Parkes Weber.—The case is a fulminating one, though not an example of Henoch's fatal type of "purpura fulminans." The patient, a well-built boy, aged 13 years, was admitted to hospital on April the 17th, 1913, with the history that he had enjoyed good health until three days previously, when the present trouble commenced. On admission the boy was covered with petechiæ and ecchymoses varying greatly in size and from red to blue-black in colour. The darker petechiæ and larger ecchymoses were especially numerous on the lower extremities. There were many submucous petechiæ and ecchymoses in the mouth and pharynx; and there was a subconjunctival hæmorrhage over the sclerotic of his left eye. The urine passed on admission looked like slightly diluted blood with a little brownish colouring matter superadded; the specific gravity was 1022, and the reaction neutral; microscopical examination showed nothing special except blood-corpuscles. There was blood in the fæces when examined on April the 18th. Examination of capillary blood (Dr. Bauch) on admission: Red cells 2,360,000 and white cells 7000 to the cubic millimetre of blood. Differential count of white cells: Lymphocytes, 26·1 per cent.; monocytes, 1·9 per cent.; polymorphonuclear neutrophiles, 69·8 per cent.; eosinophiles, 1·1 per cent.; no mast-cells; myelocytes, 1·1 per cent. During the count of white cells two nucleated red cells (both normoblasts) were seen. There was no poikilocytosis. The erythrocytes appeared natural with the exception of very slight anisocytosis and polychromatophilia. By examination of the heart and lungs, and by palpation of the abdomen, nothing abnormal was discovered. There was no enlargement of the liver, spleen, or superficial lymphatic glands.

On admission a subcutaneous injection of gelatine (16 c.c. of Merck's "gelatina sterilizata") was given, and he was ordered milk, fruit, fresh vegetables, eggs, fish, etc., as well as jelly made from gelatine in his diet. The improvement in his condition was rapid and striking. On April the 19th there was much less hæmaturia, and the urine passed on the afternoon of the following day was quite free from blood and albumin. The subcutaneous hæmorrhages had in great part disappeared by April the 27th, and hardly a trace of the petechiæ and ecchymoses in the mouth remained. It should be mentioned, however, that though no retinal hæmorrhages were seen on admission (Dr. C. Markus), some appeared on April the 20th, one large one on the inner side of the optic disc of the left eye giving rise to loss of the outer part of the visual field in that eye. These retinal hæmorrhages are likewise clearing up, and his vision is now practically normal in every way in each eye. The red cells in his blood (May the 2nd) have already risen to 4,000,000 in the cubic millimetre; hæmoglobin 55 per cent. Dr. G. R. Ward, who has kindly examined a blood film, regards the appearances as characteristic of the condition usually met with some time after hæmorrhage, the variations of the erythrocytes in shape and size and staining property being greater than in normal blood. The patient's temperature, from his admission on April the 17th to April the 22nd, was often up to about 100° F., but since that date there has been no fever.

Philadelphia Pediatric Society.

April the 8th, 1913, Theodore Le Boutillier, M.D., President.

Hydrocephalus.—Dr. John Speese showed a case of hydrocephalus of extreme degree. The child had a small spina bifida; one month after birth the head began to enlarge; at two months it measured 60 cm. in circumference, with fontanelles widely open and superficial veins greatly distended. Some enlargement of the spina bifida was noticed, with constant oozing of cerebro-spinal fluid since. Both legs were paralysed, with absent reflexes. The general nutrition of the child was excellent. There was no history of syphilis in either parent. The hydrocephalus was to be explained by the possible prenatal closure of a foramen, since the spina bifida was already one congenital defect. The degree of the hydrocephalus was so great as to exclude any thought of operation.

Dr. Le Boutillier spoke of a baby, not so young as this, who was apparently normal until five months old. At seven months the head measured 23 in. The baby died at nine months.

Cerebellar Hæmorrhage.—Dr. Le Boutillier showed a girl, aged 5 years, who had fallen ten days before being observed. Family and previous history were both negative. Five days afterwards she developed staggering gait, which became progressively worse, until she could neither walk nor stand alone. Movements of the hands were also inco-ordinate, there were jerking movements of the head and at times slight nystagmus. When lying quietly in bed all movements ceased; but when she tried to sit up all movements were marked. Reflexes were lost except for an occasional slight knee-jerk on the right. Nose, throat, ear and eye examinations were negative. X rays showed no shadows. The diagnosis was hæmorrhage into the cerebellum.

Sarcoma of the Kidney.—Dr. Warren Walker, by invitation, showed the specimen of a hypernephroma, removed from a child, aged 2 years. Seven weeks before operation the mother first noticed bloody urine; then scanty urination and a tumour, which was freely movable and not painful. Cystoscope showed no urine passing from the left ureter. The child had recovered since.

The Histology of Urticaria Pigmentosa.—Dr. Frank Crozer Knowles reported five cases in detail, with a thorough review of the subject. The characteristic features and diagnostic picture were clearly demonstrated in one case. The basal cell layer showed a marked amount of pigment. The corium exhibited large quantities of mast-cells, arranged in a columnar manner and in dense groups. Numerous mast-cells were also found round the blood-vessels and lymph-channels, surrounding the sebaceous and sweat glands. The theories of the origin of these cells and of urticaria pigmentosa were discussed and photographs of patients and of the histological features were shown.

Dr. E. F. Corson said that this was, in the majority of cases, a disease of early childhood. It was not common, and must be distinguished from simple urticaria, which was due to indiscretion in diet, drugs, etc. The

lesions of pigmented urticaria, on the contrary, remained usually for a number of years. Glandular enlargement was not uncommon. While it might resemble xanthoma, the localisation of the lesions was different; besides, rubbing the lesion caused the production of a wheal. Treatment was of little avail; even X rays were of doubtful value.

The Bacillus Bulgaricus in Gastro-enteritis and Ileo-colitis.—Dr. John F. Sinclair described thirty-two cases of acute gastro-enteritis and ileo-colitis treated by tablets containing the *Bacillus lactis bulgaricus*. The ages of the children varied from 17 days to 2 years. Twenty had gastro-enteritis and twelve ileo-colitis. Eleven died, six of them from ileo-colitis. The cases of gastro-enteritis had normal stools within five days on the average; only seven of the ileo-colitis cases cleared up and showed normal stools. Nine days was the average time required. Sixteen cases showed an average loss in weight of $8\frac{7}{5}$ oz., while twelve cases showed an average gain of $6\frac{1}{4}$ oz., by the end of the first week. Practically all who recovered showed a gratifying gain in weight upon discharge. The feeds were individualised to suit the babies. An initial dose of castor oil was given in every case. Tablets of the *Bacillus bulgaricus*, while not specific, were of distinct service in controlling the putrefactive process in the intestines, thus establishing a normal condition of the stools.

Dr. D. J. Milton Miller, of Atlantic City, N. J., said that he was very sceptical about the results obtained both by Dr. Clock and Dr. Sinclair. Dr. Clock did not stop giving milk at all, though Dr. Sinclair did for a day or two. Dr. Sinclair reported 25 per cent. mortality, while Dr. Clock had had universal success. Dr. Miller protested against the immediate use and unreasonable endorsement of untried new remedies. If any one thing had reduced infant mortality, it was the comparatively recent practice of cutting off the food at once. This method had not been employed more than ten or fifteen years. Dr. Miller had used these tablets in two chronic cases without much success. Buttermilk might be of great value in some cases, especially long-standing, chronic or subacute cases of colitis with sour, fermented stools. In such he had used freshly prepared, home-made buttermilk heated to 170° F.

Dr. Seilikovitch remarked that both these tablets and butter-milk may be of great value in some cases, but not in every case.

Dr. Le Boutillier said that he had tried these tablets upon babies with fermentative diarrhœa. While a large percentage improved, some failed to improve and several relapsed.

Dr. Sinclair called attention to the fact that all of Dr. Clock's twenty-two cases had occurred in private practice and were surrounded by all possible advantages. While he did not consider the tablets a specific at all, they apparently did good in a large number of cases when the food had been stopped for twenty-four hours or longer.

Renal Tumours in Childhood.—Dr. Emery Marvel, of Atlantic City, N.J., reported the case of a child of 27 months, with an abdominal tumour. Four months later it was operated upon, four days after being brought to the physician for the first time. The right kidney, enclosing the tumour, was removed, weighing $4\frac{1}{2}$ lb. The patient recovered promptly; but now, three months after the operation, the child was apparently dying from a large tumour of the liver. While not especially rare, renal tumours were not common in childhood. Practically all solid tumours were malig-

nant. They most probably rose from rests of vestigial embryonal structures. Without operation, the prognosis was certain death. Authenticated recovery after removal had been frequently reported in recent years, notably by Robert Abbe. The immediate removal of the tumour is the only hope.

Dr. L. F. Stewart, by invitation, described the tumour. The major portion consisted of loose connective-tissue network. Running through this were strands of cells closely resembling typical fibrous connective tissue, but with larger, longer and narrower nuclei. On staining they were recognised as striated muscle-fibres more or less embryonic in character. Then there were clusters of round-cell sarcoma cells. The tumour belonged to the group called myosarcoma. The presence of several distinct tissue types would lead to the opinion that it was a teratoma, with very limited differentiation and a malignant tendency.

Precocious Development of the External Genitalia due to Hypernephroma.—Dr. H. D. Jump, with Dr. H. Beates, jun., and Dr. W. W. Babcock, by invitation, reported this case in a girl of seven years, who had shown growth of hair on the pubis at one year. At the age of seven there was profuse growth on the pubis, in the axillæ, on the chin and upper lip. The skin of abdomen and legs was rough; there was acne on the face, but without pigmentation. She was mentally precocious, and remarkably strong. Her voice was coarse and deep She was affectionate, played with dolls, but preferred to give rather than receive caresses. At the age of seven an abdominal tumour was found in the right hypochondriac region, with no enlargement of the superficial lymph glands. The clitoris was an inch long, half an inch in diameter, notched on the under surface, suggesting hypospadias. At operation an enormous perivascular and adherent hypernephroma of the right kidney was removed, with death three hours after operation. The tumour occupied nearly the entire abdominal cavity. Uterus and ovaries were infantile. Left kidney and adrenal appeared normal. The lungs showed moderate metastasis. The microscope showed hypernephroma with much tissue of the type of the adrenal cortex. No adrenal body was found. It was uncertain whether the tumour had developed from the adrenal tissue itself or from adrenal rests in the kidney. Dr. Jump reviewed the seventeen other cases previously reported. Fourteen of those eighteen cases were girls. These cases should be differentiated from true sexual precocity in girls by the presence in the latter of menstruation, enlargement of breasts and retention of female characters; from similar conditions in boys by the development of penis and testes. All eighteen cases died before the sixteenth year. With this syndrome there was presumptive evidence of hypernephroma of the adrenal cortex: exploratory operation should be done early, even before a tumour was palpable; with a tumour, its removal was imperative.

Dr. Miller admitted that, when he had shown his case ten years ago, he had had no knowledge of the connection between sexual abnormalities and the adrenals. His case died at 2 years, one year after he had shown her to the Society. If the changes in the adrenal cortex began early in intra-uterine life, the child was born a so-called hermaphrodite and was usually a female with enlarged clitoris and empty scrotum; if they began late in intra-uterine life, the clitoris was large and there was hair on the pubis. Dr. Marvel's case was probably a girl, though the family had evidently considered her a boy.

Société de Pédiatrie, Paris.

April, 1913. *Bulletin No.* 4.

Congenital Radio-ulnar Ankylosis.—M. Mouchet showed a boy, aged 11 years, with this bilateral malformation, without deformity of the elbow, but with atrophy of the muscles of the forearm.

Dupuytren's Sign in Congenital Dislocation of the Hip.—M. Lance found this sign present in a large number of children, rarely to any marked extent, but noticeable even with slight displacements. In the infant it was a sign of extreme value, and was almost constantly present; it was less frequent in the young child, in whom it was usually associated with great laxity of the ligaments, absence of muscular retraction, and often a badly formed acetabulum. Its presence in such cases was of bad prognosis with regard to the permanence of the reduction. Rarer still in elder children it was especially found in posterior displacements, when the muscular contraction was not too great to prevent the descent of the head of the femur.

Prognosis and Treatment of Acute Appendicitis at the Onset of the Attack.—M. Savariaud declared himself a convert to early operation, and gave his reasons; the only objections, he declared, were the possibility of frequent errors in diagnosis and the presence of adhesions, rendering the operation dangerous and complicated.

Rectal Prolapse.—M. Veau reported the case of a child, aged 15 months, with an enormous rectal prolapse easily cured by a wire ligature.

Vincent Dickinson.

Abstracts from Current Literature.

Medicine.

Dissemination of diphtheria bacilli in the heart-blood and organs (*'Arch. f. Kinderheilk.,'* 1913, *Baginsky Festschrift, p.* 698).—**P. Sommerfeld** records his investigations carried out at the Kaiser und Kaiserin Friedrich Kinderkrankenhaus in Berlin, from 1907 to 1912; 320 cases of diphtheria were examined as soon after death as possible. The blood was sterile in 132 cases (41·3 per cent.), contained cocci only in 146 (45·6 per cent.), and cocci (chiefly streptococci) and diphtheria bacilli in 42 (13·1 per cent.). Diphtheria bacilli were found almost invariably in the lungs and regional glands, less frequently in the liver and spleen, and very rarely in the kidneys. They were fairly frequent in the bile and cerebro-spinal fluid and very rare in the medulla. In every case they were associated with cocci. J. D. Rolleston.

The occurrence of diphtheria bacilli in the nose and throat of marasmic infants (*'Münch. med. Woch.,'* 1913, lxx, *p.* 512).—**E. Conradi** records 10 cases of infants aged from 2 to 7 months who for varying periods showed virulent diphtheria bacilli—in 8 in the nasal secretion and in 2 in

the throat—without any clinical symptoms of diphtheria. All the infants affected were in a low state of nutrition and most showed signs of the exudative diathesis. Children in adjacent beds whose general condition was better were not affected. J. D. Rolleston.

Diphtheria septicæmia (*'Am. Journ. Dis. Child.,'* 1913, v, *p.* 317).—**E. Morgan** reviews the literature and records a fatal case in a girl, aged 7 months, admitted to hospital for vomiting and progressive loss of weight. A fortnight later a profuse nasal discharge occurred, containing diphtheria bacilli. Improvement followed administration of antitoxin, but a month later the temperature rose to 102° F. and kept high. A bloody nasal discharge again occurred containing diphtheria bacilli, and organisms resembling these but non-pathogenic to guinea-pigs were isolated from cultures of blood taken from the external jugular vein. No autopsy. J. D. Rolleston.

A case of larval diphtheria (*'Nederland. Tijdschr. v. Geneesk.,'* 1913, i, *p.* 534).—**A. van Bemmel** was called to see a girl, aged 8 years, with cyanosis and severe dyspnœa. The nose and throat appeared normal; the glands were not enlarged and the temperature was normal. Laryngoscopic examination showed that the vocal cords were reddened, but that their movement was good. Tracheotomy was performed, and no membrane, but only mucus was coughed up. Recovery took place. A faucial culture was negative, but a culture of the tracheal mucus contained virulent diphtheria bacilli. Four days later the girl's mother was taken ill with faucial diphtheria. The writer alludes to Schols' case (*vide* British Journal of Children's Diseases, 1910, vii, *p.* 504) and to twenty-six cases reported by Lautmann, in which the faucial cultures were negative and the tracheal ones positive.

J. D. Rolleston.

Atypical pharyngeal diphtheria (*'Journ. Amer. Med. Assoc.,'* 1913, lx, *p.* 1412).—**S. C. Lind** lays stress on the necessity of making cultures from every "sore throat," as the Klebs-Loeffler bacillus may be the cause of so-called tonsillitis and the true nature of the disease may be unsuspected. In support of this he describes three cases: (1) A girl, aged 11 years, who for twenty-four hours had experienced slight distress on swallowing and some constitutional disturbance, but not enough to keep her from school. There was some hyperæmia and congestion of the pillars, tonsil and posterior pharyngeal wall. Diphtheria bacilli were found. No antitoxin was given, and the patient recovered without being put to bed. (2) A boy, aged 11 years, who during a routine inspection was found to have considerable hyperæmia of the throat and a "creamy blue" exudate about $\frac{1}{8}$ in. in diameter on one of the tonsils. Temperature 99·6° F. Culture showed diphtheria bacilli. No antitoxin was given, and the boy recovered without any further symptoms except one day of "feverishness." (3) A girl, whose submaxillary glands were swollen and tender. Nothing was found in the mouth or throat, but a week later the throat was red and a dirty-white membrane about $\frac{1}{4}$ in. in diameter was found on the right tonsil. Temperature 99·4° F. Diphtheria bacilli present. The patient had no treatment. She was allowed to be up and did not feel ill. T. R. Whipham.

The blood-pressure in diphtheria (*'Inaugural Dissertation,'* Leipzig, 1912).—**W. Fiedler** examined the blood-pressure in 46 children suffering from diphtheria, using an 8 cm. armlet connected with Sahli's Hg. manometer.

Like the abstracter, whose paper he quotes, he holds that no great diagnostic or prognostic value can be assigned to sphygmomanometry in diphtheria. The pressure at the end of the first and beginning of the second week is often lowered, and then returns to the normal. Rapid fall of pressure is usually accompanied by such severe clinical symptoms that even without estimation of the blood-pressure there can be no doubt as to the prognosis. (*Cf.* British Journal of Children's Diseases, 1911, viii, *p.* 433 and 1913, x, *p.* 29.)

J. D. Rolleston.

Post-diphtheritic facial paralysis ('*Jahrb. f. Kinderheilk.*,' 1913, lxxvii, *p.* 194).—**S. Wolff.**—A girl, aged 3 months, developed complete right facial paralysis three weeks after an attack of nasal diphtheria: 12,000 units of antitoxin were injected and recovery took place in three weeks.

J. D. Rolleston.

Diphtheritic hemiplegia ('*La med. valenciana*,' 1912, xii, *p.* 65).—**A. Cubells.**—A girl, aged 4 years, about three weeks after an attack of diphtheria that had been treated with antitoxin was suddenly seized with convulsions and loss of consciousness. There were constant clonic contractions of the facial muscles and convulsive movements of the right upper and lower limbs. The symptoms subsided within three hours, but the following day left hemiplegia was found together with palatal palsy. Further injections of antitoxin were given and complete recovery took place within a fortnight. Cubells refers to the case of Bitot and Petges (*vide* British Journal of Children's Diseases, 1910, vii, *p.* 513), in which convulsive attacks resembling tetanus were found to be due to diphtheria.

J. D. Rolleston.

Diphtheritic hemiplegia ('*Clin. Journ.*,' 1913, xlii, *p.* 12).—**J. D. Rolleston** relates 6 personal cases which occurred among a total of 9075 completed cases of diphtheria and reviews the literature. Eighty cases are now on record; 28 were males, 37 females, and in 15 the sex was not stated. The ages ranged from one and a half to seventeen years. Right hemiplegia occurred in 48, in 21 of whom aphasia was noted, left in 27 and in 5 no details were given. The hemiplegia occurred at the following dates: First week 1 case, second week 14, third 27, fourth to seventh 12. In 14 cases where no exact date is given it is said to have occurred in convalescence; in 12 no date whatever is given. Recovery took place in 52, though in only 4 was there complete restoration of function, death in 24, and in 4 no details are given. Necropsies were held in 18 cases. Embolism was found in 13, thrombosis in 3, hæmorrhage in 1, and sclerotic atrophy in 1. In all the cases in which details are given the initial attack was severe. Albuminuria and ordinary diphtheritic paralysis were present in a large number. Reference is made to the relative frequency of embolism in diphtheria (*cf.* British Journal of Children's Diseases, 1910, vii, *p.* 529).

Author's Abstract.

Diaphragm of trachea after tracheotomy ('*Münch. med. Woch.*,' 1912, lix, *p.* 1959).—**K. Justi.**—A girl, aged 7 years, a month after tracheotomy for laryngeal diphtheria, began to suffer again from dyspnœa. A second operation was performed at the site of the old wound, when a sickle-shaped band involving the whole lumen of the trachea, but thickest on the dorsal aspect, was seen at the upper end of the tracheal wound.

Three months later the band had become transformed into a membrane and was removed by polypus forceps, when it was found to consist of connective tissue without cartilage, being obviously due to scar formation in the mucous membrane. The diaphragm formation was certainly not caused by the tracheotomy tube, but probably by the cicatrisation of a diphtheritic loss of substance. Nine months after the first tracheotomy the child was finally able to do without a tube and complete recovery resulted. Only three similar cases have been recorded. J. D. Rolleston.

Fatal late hæmorrhage after tracheotomy in diphtheria (*'Mitteil. a. d. Grenzgeb. der Med. u. Chir.,'* 1912, xxv, *p.* 66).—**G. A. Lallemant** records six cases from literature and the following three personal cases. (1) Boy, aged 3 years. Three days after tracheotomy the tube was removed, but owing to a fresh attack of dyspnœa tracheotomy had to be performed again eleven days later. In another four days the wound was dilated and granulations were found on the anterior wall of the trachea below the incision, a plug of iodoform gauze was inserted and the wound partly closed. A week later sudden hæmorrhage occurred and proved fatal in two minutes. The necropsy showed death to be due to aspiration of blood into the lungs from an erosion of the innominate artery which communicated with the second and lower tracheotomy wound. (2) Boy, aged 2 years. Low operation performed. Tube removed in two days. On ninth day violent cough and severe hæmorrhage which ceased spontaneously, but recurred three hours later and proved fatal, death being preceded by convulsions. Post mortem an erosion of the arch of the aorta was found between the carotid and innominate communicating with the trachea. (3) Girl, aged 5 years. Low operation. Fourteen days later hæmoptysis and death in half an hour. The necropsy showed erosion of the innominate artery. J. D. Rolleston.

Diphtheria bacillus carriers and the staphylococcus pyogenes aureus (*'Lancet Clinic,'* 1912, cviii, *p.* 234).—**A. J. Bell** recommends that a fresh staphylococcus culture in broth should be made every morning and that no culture over twelve hours old should be used. The physician should first swab the throat with the culture, the rest of which should be placed in an atomiser and used as a spray by the patient himself every two hours during the day. Such treatment will substitute days instead of weeks in bringing about a negative result. Two successful cases in adults are reported. J. D. Rolleston.

Inhalations of hot air in diphtheria (*'Lyon méd.,'* 1913, cxx, *p.* 49).—**R. Rendu** uses a portable electric dryer through which the air passes into the mouth, increasing in temperature gradually during the first ten minutes from about 18° to 150°, at which it remains stationary. As soon as the limit of tolerance is reached the temperature is lowered and then raised again in the same way. Thirty-three children were treated with this hot air and thirty-three with serum. Eliminating deaths which could not be attributed to the method, viz. due to measles contracted while under treatment, the mortality was the same in each series, *i. e.* 15 per cent. The incidence of paralysis was also the same (9 per cent.). No cardiac complication was observed. The temperature came down and the false membrane disappeared as rapidly in one series as in the other—in fact the results were identical. The author considers that the two methods should be associated as they are not incompatible, the serum being antitoxic and the hot air

bactericidal. The latter may, however, be employed alone in tuberculous patients who do not tolerate serum or in patients previously injected with serum and susceptible to anaphylaxis. VINCENT DICKINSON.

Anaphylaxis due to antidiphtheritic serum (*'Ann. de Méd. et Chir. Inf.,'* 1913, XVII, *p.* 204).—**Hallé** and **Bloch.**—A child, aged 2½ years, was admitted to hospital on September 8 with faucial diphtheria. Forty c.c. of serum were given on three successive days, the third dose being followed by generalised urticaria. On September 12 another 40 c.c. were given: the rash increased and there were joint pains. Paralysis of the palate occurred, and later ocular paralysis. On November 2 fresh membrane appeared in the fauces and extended to the palate and there were signs of croup. Forty c.c. of serum were given by the mouth. The child got worse, so the next day at 11.50 a.m. 40 c.c. were injected slowly subcutaneously. In a few seconds the face became pallid, then cyanotic and began to swell and the body and limbs relaxed. The pulse disappeared completely; respiration was irregular and hardly perceptible. The pupils dilated and became insensitive to light and the superficial reflexes disappeared. There was incontinence of fæces and urine. In five minutes the respiration improved but was Cheyne-Stokes in character, the face became less cyanotic, and some purpuric spots appeared on the temples. Camphorated oil was injected and oxygen inhaled. By noon the breathing had become more regular but was stertorous and the pulse could not yet be felt. The rectal temperature was 103° F. At 12.30 p.m. the pulse could be felt but was too rapid to count. The child opened its eyes; after this the symptoms gradually improved. Strychnine and adrenalin were injected. The next day the child was better, the membrane less, but the urticarial rash lasted for a week. Later pneumonia set in and the child was again at the point of death, but finally recovered completely.

J. PORTER PARKINSON.

Pastia's sign in scarlatina (*'La Pediatria,'* 1912, XX, *p.* 898).—**A. Bizzari.**—Pastia's sign, described by him in 1911, consists of a continuous linear eruption at the bend of the elbows of vivid red colour, sometimes of ecchymotic tint. Bizzari investigated its occurrence in 103 cases of scarlatina. In 18 it was absent, but two of these had punctiform hæmorrhages which might be considered an equivalent. Of the 95 in which it was present, in 10 it was found on one limb only, in 19 it was very slight, in 68 well marked. In 100 cases of measles it was absent except in 3 cases in which the measles eruption was atypical. In several cases of toxic and drug eruption, it was invariably absent. VINCENT DICKINSON.

The significance of Döhle's inclusion-bodies in scarlet fever (*'Zentralbl. f. inn. Med.,'* 1913, XXXIV, *p.* 369).—**A. Lippmann** and **A. Hufschmidt** investigated these bodies in 75 cases, 25 of which were scarlet fever and the rest other diseases. The bodies were present in all but 2 of the scarlet fever cases, both of which were mild, and in a certain number of cases of diphtheria, pneumonia, severe anæmia and heart disease, and absent in tumours, pertussis and nephritis. In no disease were the bodies so numerous or so typical as in scarlet fever. Their number diminished on the fourth day and was least on the eighth. The writers conclude that with high fever and absence of these bodies scarlet fever is improbable, while on the other hand, their presence alone does not justify the diagnosis of scarlet fever. J. D. ROLLESTON.

Necrosis of the vertebræ following scarlet fever (*'Glasg. Med. Journ.,'* 1912, II, p. 428).—**D. F. Riddell.**—A girl, aged $3\frac{3}{4}$ years, had an attack of scarlet fever of the septic type, with severe ulceration of the fauces, and followed by broncho-pneumonia. An attack of laryngitis necessitated tracheotomy. During the illness numerous abscesses developed, and in addition the patient had otorrhœa and nephritis. The laryngeal symptoms were very troublesome, and the urgency of these symptoms necessitated the re-introduction of the tracheotomy tube on several occasions. Two months after the commencement of the illness a small glandular abscess at the side of the trachea was opened, and about four months later a large fluctuating swelling suddenly appeared on the back, to the inner side of the right scapula. This was incised and a large quantity of foul pus was evacuated. On probing the wound necrosis of a vertebral spine was found. The child gradually sank and died twelve days later. Post mortem it was found that the spine of the first dorsal vertebra was necrosed, only a small portion remaining. The right lamina also showed signs of necrosis. There was a small patch of necrosis in the spinous process of the second dorsal vertebra. The lungs, on section, showed evidence of tuberculosis and the mediastinal glands were caseating and breaking down. J. Allan.

Co-existence of scarlet fever and varicella (*'Giorn. internaz. d. Sci. med.,'* 1913, XXV, p. 145).—**A. Montefusco.**—A female child, aged 12 months, was admitted to hospital with a desiccating varicella eruption and a faint scarlatinal rash on the fifth day of disease. The throat was slightly reddened. Temperature 39·4° C., pulse small and very frequent. The following days the scarlatinal rash became first bright and then dark red. The temperature rose to 40·5° C. and death took place three days after admission. J. D. Rolleston.

The association of scarlet fever and measles (*'Arch de méd. et pharm. mil.,'* 1913, LIX, *pp.* 241 and 321).—**Talon.**—The diseases may be said to be associated when one occurs within thirty days of the other. The association varies from 1 to 5 per cent. in different epidemics of scarlet fever given or measles. Owing to methods of hospital prophylaxis it is less frequently seen now than previously. Talon adopts the classification of Hutinel (*vide* British Journal of Children's Diseases, 1911, VIII, *p.* 375). (1) Measles preceding scarlet fever. The gravity of scarlet fever is more marked, especially if it develop soon after the eruption of measles. (2) Measles and scarlet fever occurring simultaneously. This is the least common association. The diagnosis is often difficult and the prognosis is grave. (3) Measles following scarlet fever. This is the most frequent association. Its gravity lies in the frequency of broncho-pneumonia. The paper contains an extensive bibliography. J. D. Rolleston.

Necrosis of the jaw following measles (*'Brit. Med. Journ.,'* 1912, II, *p.* 1547).—**J. A. Graham** reports a case of the above in an infant aged 11 months. J. Allan.

A second attack of mumps (*'Jahrb. f. Kinderheilk.,'* 1913, LXXVII, *p.* 197).—**J. F. Friedjung.**—A boy, aged $15\frac{1}{2}$ months, at the same time as a brother aged 10 and a sister aged 8 years, had a typical attack of mumps in June. The right parotid was affected first and then the left. Convalescence was slow, as subfebrile temperature persisted throughout the summer.

In October the child had another attack of mumps, the right parotid alone being affected. The brother and sister did not have a second attack. The rarity of second attacks in mumps is shown by Widowitz not having met with a single instance among 395 cases of mumps (*vide* BRITISH JOURNAL OF CHILDREN'S DISEASES, 1911, VIII, *p.* 131). J. D. ROLLESTON.

Whooping-cough in a premature infant (*'Univ. Toronto Med. Bull.,'* 1912, I, *p.* 45).—**C. E. Cooper Cole.**—The mother, who had developed very severe whooping-cough in the sixth month of pregnancy, gave birth to a well-developed eight months male infant on May 26. On the 29th the baby coughed for the first time. During the next fortnight the temperature ranged between 99° and 100° F. and the cough became more severe and paroxysmal until on June 12, seventeen days after birth, the child had a typical paroxysm ending in a whoop. For three weeks the paroxysms ranged from twelve to twenty-two daily. Diarrhœa with green stools occurred in the third week and emaciation was rapid. The last severe attack occurred on July 14. Finally recovery took place, and at six months the patient was the equal of any other child of that age. J. D. ROLLESTON.

Reflex stimulation of the vagus centre in the treatment of whooping-cough (*'Med Press and Circ.,'* 1912, II, p. 631).—**A. T. Brand** reports the case of a girl, aged 10 years, suffering from a severe attack of whooping-cough, who was quickly cured by blistering the skin of the neck along the course of the vagus, an area of the size of a shilling being painted with linimentum iodi on both sides immediately behind the angle of the lower jaw. The paroxysms were at once not only greatly reduced in severity, but the interval between them was so much prolonged that the acts of vomiting became infrequent, food was retained and assimilated, and the child made a rapid recovery. J. ALLAN.

A quick macroscopic agglutination test (*'Arch. Pediat.,'* 1912, XXIX, *p.* 189).—**J. Ruhräh** describes Bass and Watkins' quick macroscopic method for carrying out the Widal test for enteric fever. It is performed on an ordinary microscope slide. A suspension of typhoid bacilli is used, of the strength of 10,000 million typhoid bacilli per c.c. in 1·7 per cent. sodium chloride solution. This solution is stable and may be marketed without difficulty. A surgical needle mounted on a cork and kept sterile by immersion in a small bottle containing alcohol is used for obtaining the blood. One fourth of a drop of blood, *i. e.* about the amount used for differential blood-counts, is taken. One drop of water is spread over the blood on the slide and mixed with a clean toothpick or match-stick. One drop of the typhoid bacilli suspension is then added to the mixed blood and water, and the slide tilted from end to end or from side to side. The blood can be allowed to dry on the slide and the test performed when convenient. A positive reaction is indicated by a greyish mealy sediment, consisting of agglutinated bacilli, appearing within a minute at the edges and gradually spreading. It is useless to continue the test longer than two minutes. It is said to be as reliable as the orthodox method.

CHRISTOPHER ROLLESTON.

The Bass-Watkins typhoid agglutination test (*'Arch. Pediat.,'* 1912, XXIX, *p.* 194).—**J. Menville** describes the application of this test in two children aged 5 and 3 years. The test was first tried in the first case on the

seventeenth day when there was no eruption and the spleen was not enlarged. There was headache, but the diagnosis until the test was positive might have been pneumonia, meningitis, influenza or typhoid. In the second case the test was positive when first seen on the fourteenth day of the disease. There was no eruption, and the bowels were obstinately constipated. The pupils were dilated and there was convergent strabismus. The patient was very irritable and cried as if in pain. The clinical signs, therefore, indicated tuberculous meningitis rather than typhoid fever.

CHRISTOPHER ROLLESTON.

Typhoid fever in infancy (*'Arch. of Pediat.,'* 1912, XXIX, *p.* 565).—**J. P. C. Griffith** analyses 75 cases which occurred during the first two years of life. Nine were one year old or less, the youngest being three months, 36 one to two years old, and 30 from two to two and a half; 65 were white and 10 coloured children. In only 16 was the disease present in other members of the family. The onset was of decidedly shorter duration than in older children; the attack usually came on rapidly and was often sudden; in about one third of the cases it was more gradual. The symptoms of onset consisted chiefly of fever, diarrhœa, vomiting and loss of appetite, less often of cough, fretfulness and abdominal pain. The temperature rose rapidly, diarrhœa and vomiting were more common than in later life, prostration was seldom marked. Epistaxis was rare. In the developed attack the digestive symptoms were the same as those met with at the onset. Bronchitis was common but seldom important. The heart and pulse were seldom much involved. Nervous symptoms were not marked, the typhoid state of the adult being very exceptional. Only occasionally did the disease simulate meningitis. The temperature was not characteristic. The fall was often as rapid as the rise. The total duration of the fever was three weeks, or less in the great majority, and in at least a third only two weeks or less. Rose-spots were as common as in the adult, but appeared earlier, often from the fourth to the sixth day. Splenic enlargement was found in at least one half. Widal's reaction was as characteristic as in adults, and leucocytosis was usually absent. Thirty-one infants had some complication, a tendency to suppurative processes being commonest. Relapses occurred in three, the intervals between the attacks being fourteen, fifteen and five days. Twelve died—a mortality of 16 per cent., which is decidedly higher than in early childhood. Death was due in five to complications such as pneumonia or diphtheria and in seven to the disease itself. In only three were necropsies obtained. The appearances were similar in all. The spleen and mesenteric glands were enlarged and Peyer's patches and solitary follicles were swollen. Two showed very superficial ulceration, and one none at all. The treatment was symptomatic. Hydrotherapy was systematically employed. Cold baths were never given, the water used being of a temperature of 90° to 100° F. The diet was largely milk, sometimes broth, beef-juice and albumin water.

J. D. ROLLESTON.

Typhoid fever with five relapses (*'Zentralbl. f. inn. Med.,'* 1912, XXXIII, *p.* 1071).—**O. David** records a case in a boy, aged 11 years, where the diagnosis was confirmed by a positive Widal's reaction and the presence of typhoid bacilli in the blood. No complication or secondary infection could be found to account for the repeated rises of temperature, which were therefore regarded as relapses. The duration of the relapses was 16, 25, 19,

11 and 5 days respectively, and of the fever-free intervals 5, 2, 5, 11 and 21 days respectively. Complete recovery finally took place.

J. D. Rolleston.

Multiple intestinal perforation in a relapse of typhoid fever (*'Paris méd.,'* 1912-13, i, *p.* 490).—**Pellot** and **Galland**.—A boy, aged 15 years, on the tenth day of a relapse of typhoid developed symptoms of perforation. Laparotomy performed the same day showed four perforations in the neighbourhood of the cæcum. Each was closed with a Lembert's suture and complete recovery took place. J. D. Rolleston.

Typhoid appendicitis (*'Giorn. internaz. d. Sci. med.,'* 1912, xxxiv, *p.* 1057).—**F. Fazio** records a case of a girl, aged 13 years, in whom the typhoid infection was localised in the appendix. In addition to the symptoms of appendicitis, the spleen was enlarged, the leucocytes numbered 12,000 and Widal's reaction was positive. Recovery took place without operation. A review of the literature is given. J. D. Rolleston.

Some complications of typhoid fever in the child (*'Ann. de méd. et chir. inf.,'* 1912, xvi, *p.* 385).—**Leenhardt, Maillet** and **Canieu** describe two cases of phlebitis in typhoid fever occurring in two brothers aged $14\frac{1}{2}$ and 10 years. In the elder boy the typhoid fever was of a very mild form. Pain was first perceived in the left leg on the eighteenth day of disease before defervescence had begun. Within ten days the condition completely subsided. The fever in the younger child was of a more serious nature, but the phlebitis, which occurred as late as the fifth week of the disease, was very mild, the œdema being confined to the right foot and ankle and only lasting three days, while the pain was felt in the leg only and not in the thigh, and was of nine days' duration. There was nothing abnormal in the circulatory system of the patients or their parents. The condition was therefore due to the selective localising influence of the typhoid bacillus. The authors also describe a case of relapse which, contrary to custom, was of a very severe nature. The primary attack was of moderate intensity, but on the twentieth day of the disease the temperature and pulse had fallen to 96·8° F. and 68. The same day the temperature and pulse again rose, the right heart dilated, and there was broncho-pneumonia of both lungs. The belly became hard and rose-spots appeared. There was severe diarrhœa. The patient became delirious, with carphology and subsultus. The relapse lasted for twenty-four days. Hæmorrhage is rare in children. Three severe hæmorrhages occurred in a girl, aged 10 years, on the tenth and twelfth days of disease. The first two hæmorrhages consisted of 400 c.c. of black coagulated blood, the third of 300 c.c. After the hæmorrhages the temperature fell $3\frac{1}{2}$ degrees but the pulse was unaffected; they exerted no influence on the course of the disease. Christopher Rolleston.

Typhus fever in children (*'Arch. f. Kinderheilk.,'* 1912, lix, *p.* 199).—**A. Molodenkoff**, of the Morosoff Hospital in Moscow, records his observations on the typhus epidemic during the first four months of 1911. 115 children aged from 1 to 14 years were affected. No cases occurred in the first year. There were 22 in the first quinquennium, 55 in the second, and 38 between 10 and 14; 50 were boys, 65 girls. All belonged to the poorer classes. Unlike other observers, Molodenkoff found that the fever lasted as long in children as in adults. The severest cases occurred between

8 and 13 and children under 3 had only mild or moderate attacks. All recovered (the mortality among adults in the epidemic was 8 per cent.). Otitis media occurred in 20, usually in the third week; mastoid abscess in 4; pneumonia in 2, on the sixth and seventeenth days, and there was one case each of myocarditis, nephritis and amentia. Three were followed by scarlet fever on the fourteenth to seventeenth days, two by whooping-cough and one by diphtheritic laryngitis. Among cases erroneously certified were 7 of typhoid fever, 3 of relapsing fever, 8 of pneumonia, and 1 each of influenza, erysipelas and acute gastritis. In the diagnosis Molodenkoff lays stress on the value of the diazo-reaction, which appears early, is well marked, and is absent only in a few cases. Another constant symptom is leucocytosis. At the height of the disease 10–16,000 white cells are found. The relative number of neutrophils is increased, and that of the lymphocytes is diminished. In treatment, special attention was given to keeping the mouth and throat clean. Tepid baths were regularly employed. Owing to strict cleanliness, ventilation and avoidance of over-crowding only one nurse was infected in the epidemic. Seven of the staff had previously not had typhus. The literature is reviewed and reference made to the recent observations of Nicolle (*vide* British Journal of Children's Diseases, 1912, ix, *p.* 327).

J. D. Rolleston.

Relapsing fever in children in Odessa (*'Arch. f. Kinderheilk.,'* 1913, *Baginsky Festschrift, p.* 777).—**J. Winocouroff.**—Relapsing fever in children is one of the mildest infections, since among 291 cases in the course of twenty years (1890–1910) treated in the Children's Department of the Israelite Hospital at Odessa, there was only one death, as compared with a mortality of 2 to 6 per cent. in adults. Children are less susceptible to the disease than adults, and their power of resistance is due to a healthy heart and a liver unaffected by alcohol. Complications, which are frequent in adults, are rare in children. The temperature curve in children shows many variations from the ordinary chart. The persistence in Odessa of a disease which has disappeared from Western Europe is due to the deplorable hygienic conditions prevalent in the town.

J. D. Rolleston.

A case of hydrophobia (*'Journ. Amer. Med. Assoc.,'* 1913, lx, *p.* 990).—**A. Hand, C. Y. White** and **J. Reichel** report the case of a girl, aged 5 years, who was bitten in the cheek by a dog. The wound healed promptly, but seventeen days later fever accompanied by intermittent mania set in. Death occurred twenty-four hours after admission to hospital, the temperature rising to 109·4° F. shortly before the end. Microscopical examination of the cerebellum showed the presence of Negri bodies within the Purkinje cells. Two rabbits were inoculated with an emulsion of the cerebellum, one of which died and showed Negri bodies in portions of its cerebellum and hippocampus major, while the other did not show any signs of being infected. The inoculation test, the authors consider, is sufficient to establish the diagnosis.

T. R. Whipham.

Malaria in the newborn and young infants (*'Gaz. internaz. di med. chir., etc.,'* 1913, *p.* 265).—**V. Fragale,** as the result of five years' observations, comes to the following conclusions: (1) Newborn children never develop malaria owing to the abundance of nucleated red cells and leucocytes in their blood. (2) Many sucklings escape because of the quinine in their mothers' milk. (3) Children who have had malaria before they are one

year old rarely contract it later. (4) Before one year of age the attack is never severe and later pernicious forms are very rare. (5) A child whose mother does not take quinine regularly as a prophylactic can readily contract malaria, and if the mother suspend the treatment the child may fall ill ten to fifteen days after she has done so. (6) Malaria in the father or mother has no influence on the fœtus. J. D. Rolleston.

Streptococcus infection in a child, aged 2 years (*'Med. Record,'* 1911, II, *p.* 750).—**M. O. Magid** was called to see a boy suddenly taken ill after eating sausages with a temperature of 104° F. and marked rigidity on the right side of the abdomen. On operation the appendix was found normal, but the peritoneal cavity full of pus and streptococci. The child died; no autopsy was permitted. The cause of the peritonitis was never discovered.
F. R. B. Atkinson.

Otology, Rhinology, and Laryngology.

The prevalence of catarrhal deafness and its economic consideration (*'Med. Rec.,'* 1913, LXXXIII, *p.* 646).—**H. Hays** shows by statistics the prevalence of catarrhal deafness, which forms about 20 per cent. of the cases seen in American hospitals, and emphasises the fact that the majority start without warning in early childhood as the result of the various diseases of that period of life. The paper is an eloquent plea for the better prevention of deafness by attention to the causes which lead to it in childhood. Macleod Yearsley.

Opportunities for the preservation of hearing (*'Journ. Amer. Med. Assoc.,'* 1913, I, *p.* 878)—**Bryant** points out that in children 30 per cent. of serious loss of hearing is due to conditions which if treated in time would obviate injury to the ears. These conditions include suppuration and the so-called catarrhal conditions, which are equally important in this connection. For the prevention of the condition, nasal catarrh and adenoids must be given careful attention. In the young, proper care of nose and throat, orthodontia and prevention of mouth-breathing are necessary for conservation of the hearing. In exanthems and certain infectious fevers, the preservation of the hearing should be safeguarded by careful and constant attention to the ears and naso-pharynx. These infectious diseases are responsible for 47 per cent. of the cases of serious deafness in children.
Macleod Yearsley.

Acute suppurative otitis media due to bacillus typhosus (*'Cleveland Med. Journ.,'* 1913, XII, *p.* 146).—**D. A. Prendergast** and **O. Schultz.**—A child, who had had a mild attack of typhoid fever, developed otitis media. Puncture of the slightly reddened drum membranes was followed by a small amount of purulent discharge containing typhoid bacilli. The otitis cleared up in a few days, but death took place from meningitis two weeks later. As the cerebro-spinal fluid contained streptococci only, the meningitis was probably a secondary infection in which the typhoid bacillus was not concerned.
J. D. Rolleston.

The surgical anatomy, diagnosis and treatment of the inflammatory affections of the nasal accessory sinuses in children (*'Arch. of Pediat.,'* 1913, XXX, *p.* 4).—**S. Oppenheimer** thinks that sinusitis is

much more frequent in children than is generally considered, and that many cases of meningitis are due to unrecognised inflammation of some of the sinuses. Such inflammations in the child are more often acute or subacute than chronic, and many instances of post-nasal catarrh are but symptoms of some adjacent sinusitis. The more frequently involved sinuses in the child are the ethmoid cells and the maxillary antra. The recognition of sinusitis in the child is more difficult than in the adult, as symptoms are obscure and rarely characteristic. It is especially liable to occur in influenza, measles, scarlatina and pneumonia. Antral infection may occur in the newborn from vaginal discharges of the mother or from injury by instrumental delivery. In diagnosis X rays are of great value. Pain is often illusory, but its cessation with the onset of free nasal discharge is significant. Treatment should aim to destroy as little tissue as possible. Intranasal treatment should be carried out with preservation of turbinals as far as possible. MACLEOD YEARSLEY.

Relation to, and influence upon, respiration during childhood of normal and abnormal dental arches (*'Arch. of Pediat.,'* 1913, xxx, *p.* 25).—**A. Zentler** writes this paper to prove the importance of correcting improperly developed dental arches. By widening the dental arch, a straightening of the nasal septum and a proportionate enlargement of the nares can be obtained. Constricted dental arches do not exist where there are no adenoids. The mouth-breathing "habit" following removal of obstruction is not a habit, but the result of an anatomical change. The author thinks it is never too early to remove adenoids or too early to endeavour to correct faulty dental arches. MACLEOD YEARSLEY.

Persistent mouth-breathing following adenoidectomies (*'Boston Med. and Surg. Journ.,'* 1913, i, *p.* 230).—**Sobotky** emphasises the following points: (1) Nasal breathing exercises have not proved efficient for the cure of persistent mouth-breathing. (2) Operative treatment of the nasal condition is indicated, and must be appropriate for the age of the patient. (3) Adenoids should be removed before the typical high palatal arch is formed. (4) If this high arch is formed the treatment should be dental—such as spreading the arch and regulating the teeth. (5) Cutting a slice of mucous membrane from the enlarged lower turbinates as an aid to nasal respiration has given good results. (6) A submucous resection should not be done in children under sixteen. (7) Electrolysis, using the bipolar method, is effective in reducing the enlarged turbinates, but is not suited for children. MACLEOD YEARSLEY.

Adenoids (*'Prag. med. Woch.,'* 1913, xxxviii, *p.* 175).—**G. Brecher** regards adenoids as inherited and acquired. General unhygienic conditions, especially the damp climates of seaside towns, and acute infectious diseases are determining causes. In diagnosis digital examination should never be practised; the symptoms should be confirmed by anterior and posterior rhinoscopy. In treatment he recognises nothing but operation, but this does not mean that every case of adenoids should be operated. Only in infants is there a categorical imperative to operation. In later years the symptoms permit the indication for operation. Brecher uses a general anæsthetic for extremely nervous children. In the great majority he is satisfied with a local anæsthetic. A swab of 20 per cent. solution of alypin is passed through

the nose and left for five to eight minutes in the naso-pharynx. This is done three times with the head hanging down. His paper concludes with remarks on complications he has encountered. M. D. Eder.

Complications of adeno-amygdalectomies (*'Paris Méd.,'* 1912–13, I, *p.* 175).—**R. Moreaux** considers that to avoid secondary infection after amygdalo-adenoidectomy it is good to use the galvano-cautery in extirpating enlarged tonsils when their condition allows it. It is further necessary, before operating, to make certain that the field of operation is aseptic and to maintain the neighbouring mucous membranes in that condition for several days after intervention. Macleod Yearsley.

Certain dangers of the adenoid operation (*'Johns Hopkins Hospital Bulletin,'* 1913, XXIV, *p.* 112).—**W. E. Grove** discusses these dangers under the headings of post-operative bleeding and post-operative infections and describes two cases of the latter. He gives an extensive literature, but, strange to say, omits the exhaustive research of Grossard and Kauffmann. He insists upon careful operation and careful after-treatment.
Macleod Yearsley.

The Baltimore epidemic of streptococcus or septic sore throat and its relation to a milk supply (*'Johns Hopkins Hosp. Bull.,'* 1913, XXIV, *p.* 1).—**L. P. Hamburger** points seven morals to the tale, adorned by photographs and charts, of this epidemic. They are: (1) The undue prevalence of sore throat and other influenzoid affections should be reported to the municipal health department for investigation as to the possibility of milk conduction of the infection. (2) A streptococcus infection, when it is introduced into a community through milk, possesses an extreme virulence, and may produce a clinical picture characteristic in some aspects and complicated in many. (3) It is possible that raw milk from any dairy, though carefully produced and handled, may at some time convey a streptococcus infection. (4) From a study of the American epidemics of streptococcus or septic sore throat the importance of thorough pasteurisation of clean milk in its final containers under official inspection is clear. (5) If by accident the pasteurising plant of a dairy is disabled the dairy should notify its patrons to boil the milk. (6) When the price of pasteurised milk is prohibitive it is suggested that the practice of boiling milk should be advocated, or instruction in home pasteurising should be given in medical dispensaries by visiting nurses and by physicians. (7) Finally, it is obvious that milk inspection, as at present conducted, is inadequate. Macleod Yearsley.

Pneumococcal angina in children (*'La Pediatria Española,'* 1913, II, *p.* 132).—**A. R. Lozano** and **T. G. del Diestro** record three cases in children, aged 2, 3, and 8 years, and come to the following conclusions: (1) Pneumococcal angina is much more frequent than has hitherto been supposed. (2) It may be primary or secondary to localisation of the pneumococcus in other organs (rhinitis, pneumonia). (3) Its chief symptoms are sudden onset, vomiting, high fever, headache, muco-purulent nasal discharge, pharyngeal congestion with formation of a thin very white non-adherent membrane on the tonsils, slight glandular reaction, dysphagia and constipation. (4) The course is rapid and favourable when there are no complications. The most frequent complication is pneumonia. (5) The

diagnosis may be difficult from other forms of membranous angina, especially staphylococcal or streptococcal. (6) Even in complicated cases the prognosis is not grave, owing to the benignity of pneumococcal processes in children. (7) Treatment should be limited to hygienic measures and local applications of hydrogen peroxide. J. D. Rolleston.

Vincent's angina (*'Med. Record,'* 1913, i, *p.* 424).—**C. C. Sutter** records four cases, two of which occurred in children: (1) Girl, aged 16 years. A primary attack in which the left tonsil only was involved was followed by a relapse three weeks later, in which the ulceration was localised on the lateral walls of the pharynx. (2) Child, aged 2 years, in whom Vincent's angina occurred in the acute stage of scarlet fever and involved right tonsil, both pillars, and right lateral wall of pharynx. Treatment consisted in swabbing with hydrogen peroxide, and after the necrotic material was removed in application of 10 per cent. copper sulphate, and finally a saturated solution of potassium chlorate. The ulceration was completely healed in about three weeks. J. D. Rolleston.

Inoculation of a monkey with Vincent's angina (*'Compt. rend. Soc. de Biol.,'* 1912, lxxiii, *p.* 389).—**E. M. Marzinowski**, of Moscow, scarified the mucous membrane of the left tonsil of a *Macacus rhesus* and rubbed on it deposit taken from the throat of a patient suffering from Vincent's angina. On the fourth day the monkey's temperature rose to 39·6° C. and remained high for five days. On the fifth day a thick deposit appeared on the tonsil, increased in extent from day to day, and only disappeared on the tenth day. In addition to other micro-organisms it showed numerous fusiform bacilli and spirilla. After the temperature had become normal a cervical abscess formed, and the same organisms were found in the pus in large quantities. A smaller number were also found in an enlarged gland in the right axilla.
J. D. Rolleston.

When and why remove the faucial tonsil? (*'Therap. Gaz.,'* 1913, xxix, *p.* 80).—**W. H. Tomlinson** makes the following sensible remarks regarding the removal of the faucial tonsils: (1) A small tonsil may require removal as urgently as a large one. Size has nothing to do with the indications for removal, excepting for symptoms of obstruction. (2) Simple hypertrophy in a healthy individual is not an indication for removal. (3) Simple hypertrophy becomes an indication for removal when the degree is such that respiration, deglutition or speech is interfered with. (4) Tonsils with crypts which fail to clear themselves become the seat of chronic lacunar disease, and systemic infection is likely to occur. (5) As a general proposition the free, outstanding tonsil is less likely to cause trouble than the submerged tonsil. This is because drainage from the crypts is better. (6) The submerged tonsil, partly buried beneath the faucial pillars, is very likely to require removal, because drainage from the crypts, especially those emptying into the supra-tonsillar fossa, is interfered with. In examining this class of cases the pillars should be retracted in order better to investigate the condition of the crypts. (7) Glands at the angles of the jaw that persistently remain palpable are evidence that the tonsil barrier to infection has been passed, and are indications for tonsil removal.
Macleod Yearsley.

The remote results of tonsillotomy and tonsillectomy (*'Lancet,'*

1913, I, *p.* 444).—**Whale** points out that discussions on tonsillectomy and tonsillotomy have hitherto centred round technique, and that as yet we know not whether the tonsil is a friend or an enemy. He concludes that the disadvantages of tonsillectomy outweigh those of tonsillotomy, but admits that the former is more likely to cure the trouble for which advice is sought. MACLEOD YEARSLEY.

Severe hæmorrhage after tonsillectomy (*'Gazz. d. osp.,'* 1913, XXXIV, *p.* 313).—**A. Malan** records two cases of severe hæmorrhage, one of which occurred in a boy, aged 7 years, five hours after operation with the Fahnerstock-Mathieu guillotine, being brought on by straining at stool. The hæmorrhage arose from the vessels of the left tonsil, lasted half an hour and ceased spontaneously. No recurrence took place. The boy had previously had teeth extracted without subsequent hæmorrhage. J. D. ROLLESTON.

Angioma of the larynx, especially its relation to chronic laryngitis (*'Amer. Journ. Dis. Child.,'* 1913, V, *p.* 123).—**J. Phillips** describes a case of this very rare condition in a boy, aged 9 months. A critical review of the literature only shows 26 undoubted cases. The majority occur during middle life, the oldest being 62 years. The proportion of males to females is about 4 to 1. MACLEOD YEARSLEY.

Paralysis of dilators of the glottis following laryngeal diphtheria (*'Echo méd. du Nord,'* 1913, XVII, *p.* 154).—**Deléarde.**—A boy, aged 5 years, was admitted to hospital with purely laryngeal diphtheria. Three intubations were required. As recession persisted, a laryngoscopic examination was made which revealed paralysis of the posterior crico-arytænoid muscles. Daily injections of 10 c.c. of antitoxin were given and recovery took place in about three weeks. J. D. ROLLESTON.

Reviews.

DISEASES OF CHILDREN. By VARIOUS AUTHORS. Edited by ARCHIBALD E. GARROD, D.M., M.A., F.R.C.P., F.R.S., Physician to St. Bartholomew's Hospital and to the Hospital for Sick Children, Great Ormond Street, London; FREDERICK E. BATTEN, M.D., M.A., F.R.C.P., Physician to the Hospital for Sick Children, Great Ormond Street, and Physician to Out-patients, National Hospital for the Paralysed and Epileptic, London; and HUGH THURSFIELD, D.M., M.A., F.R.C.P., Physician to Out-Patients, Hospital for Sick Children, Great Ormond Street. London: Edward Arnold, 1913. Pp. 1184. Price 30s. net.

THE aim of the present work, as set forth in the preface, is to give a comprehensive and authoritative account of the present state of our knowledge of the diseases of children with a completeness not hitherto attempted in this country. The editorial triumvirate are to be congratulated on the success of their efforts and on the careful selection of their nineteen collaborators.

The following is a list of the contributors and their articles from the London children's hospitals: F. E. Batten, "Diseases of the Nervous System," "Diseases of Muscles"; A. E. Garrod, "Disease as it Affects

Children," "Diseases of the Ductless Glands," "Disorders of Metabolism"; R. Hutchison and G. E. Waugh, "Diseases of the Alimentary System"; F. Langmead, "Diseases of the Newborn"; F. J. Poynton, "Diseases of the Circulatory System"; G. F. Still, "Œdema in Children"; Theodore Thompson, "Infectious Diseases"; H. Thursfield, "Immunity, Serum-Therapy and Vaccines," "Diseases of the Hæmopoietic and Lymphatic Glands"; and A. F. Voelcker, "Rheumatism and Chorea" (Great Ormond Street); E. Cautley, "Feeding of Infants and Children," "Disorders of Nutrition" (Belgrave Hospital); A. M. Gossage, "Heredity," "Congenital Syphilis," and H. Morley Fletcher, "Diseases of the Liver, Pancreas and Peritoneum" (East London Hospital); L. Guthrie, "Functional Diseases of the Nervous System," and G. A. Sutherland, "Diseases of the Lungs and Pleuræ" (Paddington Green); J. W. Carr, "Tuberculosis," and H. D. Rolleston, "Diseases of Bones and Joints" (Victoria Hospital).

The contributors from the other London hospitals are H. G. Adamson, "Diseases of the Skin," and F. A. Rose, "Diseases of the Naso-pharynx and Larynx" (St. Bartholomew's Hospital), and E. W. Goodall, "Infectious Diseases" (Eastern Fever Hospital). J. S. Fowler, "Diseases of the Genito-Urinary System," and John Thomson, "Congenital Mental Defect in Childhood," are the representatives of the Edinburgh Royal Hospital for Sick Children. In addition to twenty-three chapters there are four initial sections or "Prolegomema," of which the most important is that by E. Cautley on "The Feeding of Infants and Children." Unlike some authorities the writer regards the tuberculin test and Wassermann's reaction as unnecessary in the choice of a wet-nurse. Percentage feeding is deprecated as scientifically unsound, and the following lines deserve quotation: "The repetition of meals identical in flavour, quality and quantity is absolutely opposed to Nature's method of feeding. The child's stomach is not a test-tube, nor feeding merely a chemical experiment." In the chapter on "Diseases of Nutrition," in which atrophy, rickets and scurvy are included, the same writer gives valuable suggestions as to the treatment of these conditions. He dismisses as based on insufficient evidence the various hypotheses brought forward in explanation of chronic atrophy, which he regards as simply due to an unsatisfactory diet.

In the chapter on "Diseases of the Alimentary System," by R. Hutchison and his surgical colleague, G. E. Waugh, special attention should be given to the sections on indigestion and constipation in infancy and late childhood, cyclic vomiting, intestinal obstruction, appendicitis, and congenital pyloric stenosis. The administration of purgatives and enemata in the first few hours of the attack of appendicitis before the diagnosis is established is strongly condemned. In the great majority of cases of congenital pyloric stenosis operation is regarded as unnecessary. In his article on "Diseases of the Lungs and Pleuræ," G. A. Sutherland protests against two current opinions, viz. that an empyema is easily diagnosed and that its surgical treatment requires little skill. At the operation he recommends that a thorough exploration of the pleural cavity should be made with the finger, so as to break down adhesions and feel for a second empyema. He does not believe that breaking down of adhesions causes spread of infection to healthy pleura.

An admirable account is given of broncho-pneumonia and lobar pneumonia, and their distinguishing features are summarised. Special stress is laid on the diagnostic value of inverted respiratory rhythm and inverted action of the alæ nasi in pneumonia. In his important contribution on cardio-

vascular disease F. J. Poynton draws attention to the importance of infective processes in the causation, and illustrates this by an analysis of 600 personal cases. His study of rheumatic heart disease should be read with the chapter on "Rheumatism and Chorea," by A. F. Voelcker, who appears to regard the specific nature of the organism described by Poynton and Payne as non-proven, though admitting that it has fulfilled Koch's postulates more nearly than any of its competitors.

L. Guthrie has a fascinating article on "Functional Diseases of the Nervous System," which he divides into somatic and somato-psychic or psycho-somatic. He rejects the view that functional disorders are entirely psychic in origin, and lays much stress on the influence of disorders of the sympathetic cortex cerebri and optic thalamus in the production of hysterical and functional neuroses. A valuable guide to organic diseases of the nervous system and diseases of muscles is provided by F. E. Batten. The sections on acute poliomyelitis, cerebral diplegia, progressive spinal muscular atrophy and muscular dystrophy, to the elucidation of which the writer has so much contributed, will be read with special interest.

E. W. Goodall and Theodore Thompson each contribute a chapter on infectious diseases, the former being mainly concerned with those diseases which in this country are treated in isolation hospitals. We would direct special attention to the article on "Smallpox," which is usually either entirely omitted or inadequately discussed in text-books devoted to children's diseases.

In dealing with outbreaks of diphtheria in institutions or schools the same writer deprecates wholesale swabbing of the inmates, and regards it as unnecessary to isolate chronic carriers if they are healthy. This view provokes a protest from the editors, who maintain the orthodox opinion held by the majority of bacteriologists, school medical officers and medical officers of health.

The volume closes with an admirably lucid account of diseases of the skin by H. G. Adamson.

Space has not allowed us to give more than a brief notice to some of the more important articles, but it suffices to say that, both from a practical and a theoretical point of view, all are of high value. Emanating as they do from those who are themselves authorities the chapters are not overloaded with references, though in most cases recent literature receives due acknowledgment.

The illustrations are good as a whole, though we regard many as unnecessary, and some, especially in the chapter on "Diseases of the Skin," are scarcely worthy of the text.

For a book of this size there is a praiseworthy scarcity of misprints, most of which are to be found in the names of foreign writers, *e.g.*, Brünig for Brünings (p. 146), Babonneuse for Babonneix (pp. 823, 825), Plout for Plaut (p. 141), Popischill for Pospischill (p. 462), Schlotz for Schiötz (p. 1039), and Terrier for Terrien (p. 68). The false concord "a sudamina" (p. 767), and the loose expression, "The child cried . . . like a diphtheritic paralysis" (p. 823), will doubtless be corrected in the next edition.

These, however, are but trivial blemishes, and in no way detract from the value of a work which will long rank as the leading English text-book on children's diseases. J. D. R.

ARCHIV FÜR KINDERHEILKUNDE. LX UND LXI Band. Zugleich Festschrift für Adolf Baginsky. Herausgegeben von Dr. A. SCHLOSSMANN. Stuttgart: Ferdinand Enke, 1913. Pp. 825. Price M. 26.

THIS fine volume, which is dedicated to Prof. Baginsky on the occasion of his seventieth birthday, contains forty-three articles by well-known authorities on children's diseases on the Continent and the United States of America. It is to be regretted that this country is not represented. A detailed notice of the individual articles will appear later in our "Abstracts from Current Literature," but in the meantime a list of the authors and their papers arranged according to their subjects may be of interest to our readers.

Infant Feeding and Hygiene: "Sterile Raw Milk," A. Schlossmann (Düsseldorf). "The Baginsky-Hafland Electric Safety Incubator," W. Thiede (Berlin). "Municipal Care of Infants in Lübeck," T. Joel (Lübeck). "Infantile Mortality in the Duchy of Baden," S. Felsenthal (Mannheim). Anatomy: "Form, Position and Changes of Position of the Bronchial Tree in Childhood," St. Engel (Düsseldorf). Acute Infectious Diseases: "Variola in the Newborn," A. Epstein (Prague). "Dissemination of Diphtheria in the Heart-blood and Organs," P. Sommerfeld (Berlin). "Relapsing Fever in Children in Odessa," J. Winocouroff (Odessa). "Contagiosity of Heine-Medin's Disease," J. Langer (Graz). "Erroneous Diagnoses in Poliomyelitis," J. Zappert (Vienna). Tuberculosis: "Course of Tuberculosis in Childhood," A. Czerny (Berlin). "Paths of Infection in Tuberculosis during the First Year of Life," O. Medin (Stockholm). "Clinical Observations on the Tuberculosis of Infants," J. Cassel (Berlin). "Muscular Work and Bodily Constitution: A Contribution to the Campaign against Tuberculosis in Childhood," H. Roeder (Berlin). "Lactation in Maternal Tuberculosis," O. Cozzolino (Cagliari). "On the Prognosis of Tuberculosis in Infants," G. Tugend reich (Berlin). "Studies on Tuberculin," H. Aronson (Berlin). "Ambulatory Tuberculin Treatment of Scrofula and Tuberculosis in Children," W. Wolff (Berlin). Syphilis: "On Late Hereditary Syphilis," G. Alsberg (Cassel). "The Subsequent History of My Cases of Syphilis in Children treated with Salvarsan," J. von Bokay (Buda-Pesth). "Heredosyphilitic Spastic Paraplegia," A. B. Marfan (Paris). Diseases of Alimentary System: "Primary Purulent Inflammation of the Salivary Glands," J. Lewin (Berlin). "Rumination in Infancy," H. Brüning (Rostock). "Dysentery in Infants and Young Children," J. Bauer, Ellenbeck and Fromme (Düsseldorf), and "Dysentery in Infants," E. Siegel (Berlin). Diseases of Circulatory System: "Pulse and Blood-pressure in Later Childhood," R. Friberger (Upsala). "Unimportant Murmurs in the Precordial Region of Children and Young Persons," C. Hochsinger (Vienna), and "Banti's Disease in Children," A. D'Espine (Geneva). Neurology and Psychiatry: "Acute Encephalitis," J. Comby (Paris). "Little's Disease," L. Concetti (Rome). "Diagnosis of Optic Neuritis by Ophthalmoscopy," R. Taderstein (Berlin). "Feeble-minded Children," E. Schlesinger (Strassburg), and "Masturbation before School Age," E. Neter (Mannheim). Internal Secretions: "Chemical Composition of the Thymus Gland in Children," L. Mendelsohn (Berlin), and "Lesions of the Suprarenals in Scarlet Fever," V. Hutinel (Paris). Rickets: "Defects of Enamel and their Relation to Rickets and Spasmophilic Conditions in Infancy and Childhood," H. Helbich (Berlin), and "Treatment of Rachitic Deformities," M. Böhm (Berlin). Surgery: "Development and Modern Problems of the Surgery of Peritonitis," T. Gluck (Berlin). "Acute Osteomyelitis and Osteoplastic Surgery in Childhood at the Kaiser and

Kaiserin-Friedrich Children's Hospital from 1890–1912," F. Wachsner (Berlin). Miscellaneous: "Pædiatrics in the United States," A. Jacobi (New York). "Hufeland's Views on Pædiatrics," J. W. Troitzy (Charkow). "Recollections," R. Fischl (Prague), and "Studies from the Children's Policlinic at Hamburg," C. Stamm. A list of Prof. Baginsky's contributions to literature is appended. J. D. R.

Studies in Smallpox and Vaccination. By William Hanna, M.A., M.D., D.P.H., Assistant Medical Officer of Health for the Port of Liverpool; Visiting Physician to the Port Isolation Hospital. Bristol: John Wright & Sons, Ltd., 1913. Price 7s. 6d. net.

This work, which is based on the author's experience in the City and Port of Liverpool during the last ten years, is divided into three parts. Part I is devoted to a statistical study of 1163 cases of smallpox, with special reference to vaccination in modifying the disease. In Part II there is an analysis of 943 cases of smallpox (with primary vaccination) in relation to scar-area and severity of disease. Part III contains observations on the interaction of concurrent variola and vaccinia.

The following figures may be quoted here, as bearing on the incidence of smallpox in childhood.

Among the 943 vaccinated no cases of smallpox occurred under 2 years of age, from 2 to 5 there were 7—all very mild cases—and among the 62 cases between 10 and 15 there were no severe cases or deaths. On the other hand, among 220 unvaccinated, 29 cases occurred under 2 years, with a mortality of 58 per cent.; 26 between 2 and 5, with a mortality of 30·6 per cent.; and 31 from 10 to 15, with a mortality of 3·2 per cent.

The book is illustrated by a number of excellent photographs, illustrating the various degrees of severity of smallpox and of the protection afforded by vaccination, and should prove a useful guide both to practitioners and public health administrators. J. D. R.

Smallpox and its Diffusion. By Alexander Collie, M.D., M.R.C.P. Bristol: John Wright & Sons, Ltd. Pp. 58. Price 2s. net.

Dr. Alexander Collie has written a clear and amusing little work attacking the theory of aërial convection of smallpox, which emanated from the medical department of the Local Government Board more than thirty years ago. The prevalence of smallpox round a hospital is explained, not by aërial convection, but by the faulty methods of hospital administration, which allowed ambulance porters and nurses to stop and refresh themselves and their patients at public-houses, and by the fact that in certain areas no compulsory notification was in force, and mixed cases were of common occurrence, being diagnosed then, as now, by eminent dematologists as rare skin diseases with resounding names.

The figures given by the Hackney Medical Officer of Health receive the following criticisms:

In the first place a non-epidemic decennium is compared with an epidemic period.

Secondly, it was true that increased incidence was noted in the streets surrounding the hospital, but before the utilisation of the building for smallpox these streets did not exist.

Thirdly, the character of the neighbourhood changed from a prosperous

and middle-class district to a thickly populated slum, and of this no mention was made.

Fourthly, the author of the Hackney aërial convection theory left out of account the institutions within 100 feet of the hospital, which were free from smallpox, or nearly so, and which, since the question of personal contact was eliminated, should offer a splendid field for the proof of aërial convection, inasmuch as these institutions were full of susceptible persons.

Dr. Collie has proved his case, but it is unfortunate that he has left unnoticed later work, such as that by Dr. Thresh. C. R.

Pye's Surgical Handicraft. A Manual of Surgical Manipulations, Minor Surgery and other Matters Connected with the Work of House Surgeons and Surgical Dressers. Edited and largely re-written by H. H. Clayton Greene, B.A., M.B., B.C., F.R.C.S., Surgeon to St. Mary's Hospital. Sixth Edition. Bristol: John Wright & Sons, Ltd., 1912. Price 12s. 6d. net.

This well-known handbook, which first appeared in 1884 and has now reached its sixth edition, is too well known to require detailed notice. The present edition has been thoroughly brought up to date by the editor assisted by various specialists, among whom may be mentioned Alexander Fleming on "Recent Advances in Diagnosis and Treatment of Syphilis," Leslie Paton on "Minor Surgery of the Eye," and H. W. Carson on "Diseases of the Nose and Throat," "Common Diseases of the Larynx," and "Common Complaints of the Ear." Of special interest to the pædiatrist is Section V, entitled, "Of Cases requiring Prolonged or Mechanical Treatment," and dealing with hip-disease, spinal diseases, genu valgum, talipes, etc. The careful attention to detail shown throughout the volume well illustrates the truth of the aphorism on the front page, "Vel de minimis curat chirurgus." J. D. R.

The Medical Annual: A Year-Book of Treatment and Practitioner's Index. 1913. Thirty-first year. Bristol: John Wright & Sons, Ltd. Price 8s. 6d. net.

The appearance of this annual is always a welcome event to those interested in the progress of medicine, and the present volume is no exception to the rule.

With the exception of acute infectious diseases, which are reviewed by Dr. E. W. Goodall, the majority of the articles dealing with children's diseases are by Dr. F. Langmead, who has proved a worthy successor to Prof. G. F. Still. It is gratifying to find that this Journal's original articles, society intelligence and abstracts have been freely quoted, with due acknowledgment. We are pleased to note that there is a greater tendency than before for contributors to insert the volume and page instead of the month in their bibliographies, as reference to the original article is thereby considerably facilitated.

A glossary of new terms has been inserted, and additions are to be made yearly. The shortness of the present list should indicate that contributors have not been extravagant in their use of neologisms. J. D. R.